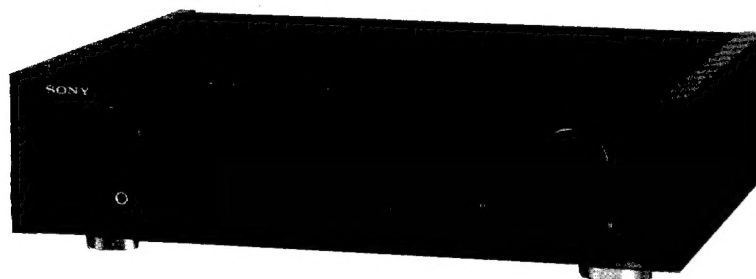


TA-E80ES

SERVICE MANUAL

*AEP Model
E Model*



SPECIFICATIONS

Item	Condition		Data
Total harmonic distortion	At rated 20 Hz - 20 kHz output		0.001%
Intermodulation (IM) distortion 60 Hz : 7 kHz = 4 : 1	at rated output		0.001%
Residual noise	Network A		Less than 8 μ V
Frequency response	PHONO MM		RIAA equalization curve ± 0.2 dB
	TUNER, CD, AUX, TAPE 1, TAPE 2, TAPE 3, ADAPTOR IN		3 Hz - 300 kHz ± 0.3 dB
Input sensitivity	PHONO	MC (3 ohms)	0.17 mV, 100 ohms
		MC (40 ohms)	0.17 mV, 1 kohms
		MM	2.5 mV, 50 kohms
	TUNER, CD (UNBALANCED), AUX, TAPE 1, TAPE 2, TAPE 3, ADAPTOR IN		150 mV, 50 kohms
	CD (BALANCED)		300 mV, 20 kohms
Maximum input capability (1 kHz)	PHONO (1 kHz, THD 0.003%)	MC	9 mV
		MM	150 mV

S/N (network)	PHONO	MC (0.5 mV)	83 dB (A)
		MM (5 mV)	95 dB (A)
	TUNER, CD (UNBALANCED), AUX, TAPE 1, TAPE 2, TAPE 3, ADAPTOR IN		105 dB (A)
Output voltage impedance	TAPE 1, TAPE 2, TAPE 3		150 mV, 1 kohms
	HEADPHONES		45 milliwatts (at 8 ohms) Accepts low and high impedance headphones.
	OUTPUT (UNBALANCED)		1.5 V, 700 ohms
	OUTPUT (BALANCED)		3 V, 1.2 kohms

— Continued on Page 2 —



STEREO CONTROL AMPLIFIER
SONY®

Item	Condition	Data
Tone controls	BASS (at 100 Hz)	±7 dB (turnover freq. 200 Hz) ±8 dB (turnover freq. 400 Hz)
	TREBLE (at 10 kHz)	±6 dB (turnover freq. 3 kHz) ±8 dB (turnover freq. 6 kHz)
SUBSONIC filter	—	6 dB/octave attenuation below 15 Hz
Muting	—	−20 dB

General

System	Low-noise FET high gain, NFB type equalizer amplifier, low noise FET, Double-stage differential, push-pull output, flat amplifier passive type direct tone control
Power requirements	European countries: 220 V AC, 50/60 Hz Other countries: 110 -120 V or 220 -240 V AC adjustable, 50/60 Hz
Power consumption	20 W
AC outlets	European countries: 3 switched 200 W max. Other countries: 3 switched, 500 W max.
Dimensions	Approx. 470 x 130 x 370 mm (w/h/d) Incl. projecting parts and controls
Weight	Approx. 11.5 kg
Supplied accessories	Remote commander RM-S808 (1) Sony batteries SUM-3(NS) (2) Connecting cord (1)

Design and specification subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!



COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
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1. GENERAL			3-1. Circuit Boards Location		8
Precautions		3	3-2. Semiconductor Lead Layouts		9
Operating Voltage		3	3-3. Printed Wiring Boards		10
Function of Controls		4	3-4. Schematic Diagram		15
System Connections		6	4. EXPLODED VIEWS		19
2. DISASSEMBLY		7	5. ELECTRICAL PARTS LIST		23

SECTION 1

GENERAL

Precautions

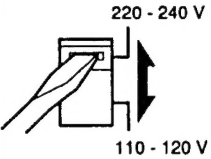
This section is extracted from instruction manual.

- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the plug out by the cord.
- Avoid installing or leaving the unit in a location:
 - near heat sources such as radiators, airducts or heaters
 - subject to direct sunlight
 - exposed to rain or moisture
 - where it is liable to come into contact with dust or dirt
 - that is unventilated, such as on a bookcase.
- Should any liquid or solid object fall into the unit, unplug the unit and have the unit checked by qualified personnel before operating it any further.
- AC power cord must be changed only at the qualified service shop.
- The unit is not disconnected from the AC power source as long as it is connected to the mains outlet, even if the unit itself has been turned off.

If you have any question or problem concerning your unit that is not covered in this manual, please consult your nearest Sony dealer.

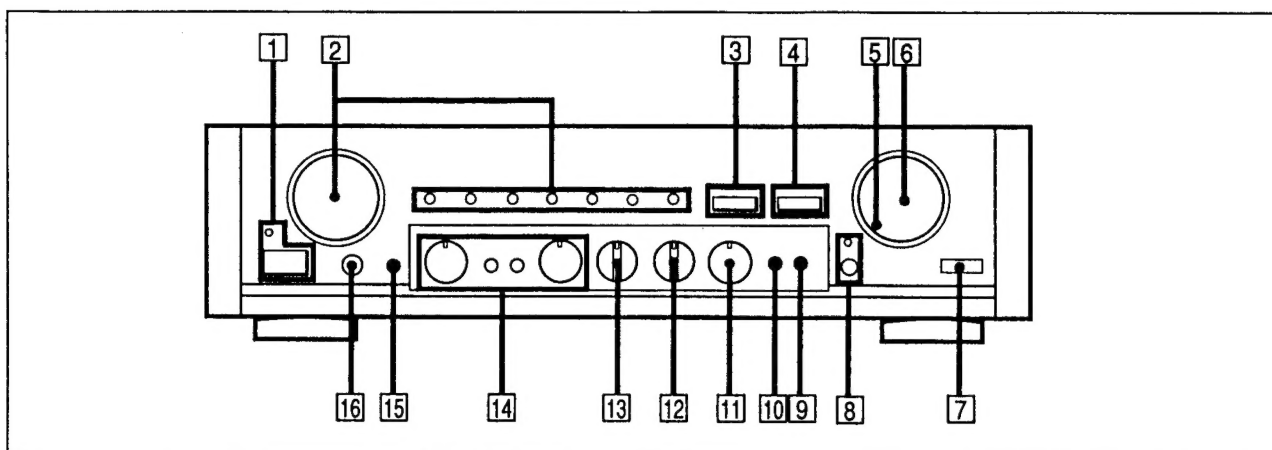
Operating Voltage

Before connecting the unit to an AC outlet, be sure that the operating voltage of your unit is identical with that of your local power supply.

European countries	Operates on 220 V AC, 50/60 Hz.
Other countries 	Operates on either 110 - 120 V or 220 - 240 V AC, 50/60 Hz. The voltage selector is located on the rear panel. If the selector must be reset, disconnect the AC power cord and set the selector to the proper voltage of your local power supply.

Function of Controls

Fonction des commandes



For instructions refer to the pages indicated in the circled number.

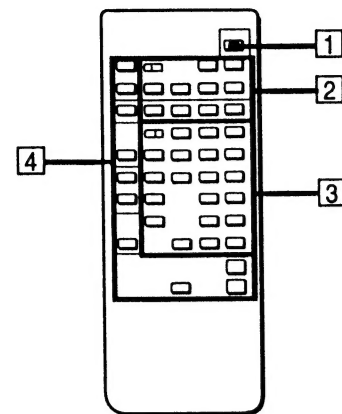
Pour les détails, se reporter aux pages indiquées dans les cercles.

- 1** POWER switch and STANDBY Indicator ¹⁸
- 2** INPUT SELECTOR and Indicators ¹⁸
- 3** ADAPTOR switch and Indicator ¹⁸
- 4** SOURCE DIRECT switch and Indicator ¹⁸
- 5** Protection and power on Indicator ¹⁸
- 6** ATTENUATOR control ¹⁸
- 7** Remote sensor
- 8** MUTING button and Indicator ¹⁶
- 9** SUBSONIC filter switch ¹⁸
- 10** MODE selector ¹⁸
- 11** BALANCE control ¹⁶
- 12** CARTRIDGE LOAD selector ¹⁸
- 13** REC OUT SELECTOR ²⁰
- 14** BASS and TREBLE controls and TURNOVER selectors ¹⁶
- 15** OUTPUT switch ¹⁸
- 16** PHONES Jack (stereo phone jack)

- 1** Interrupteur d'alimentation (POWER) et témoin d'attente (STANDBY) ¹⁸
- 2** Sélecteur et témoins d'entrée (INPUT SELECTOR) ¹⁸
- 3** Commutateur et témoin d'adaptateur (ADAPTOR) ¹⁸
- 4** Commutateur et témoin de source directe (SOURCE DIRECT) ¹⁸
- 5** Témoin de blocage et de mise sous-tension ¹⁸
- 6** Bouton d'atténuation (ATTENUATOR) ¹⁶
- 7** Détecteur de télécommande
- 8** Touche et témoin d'assourdissement (MUTING) ¹⁶
- 9** Commutateur de filtre subsonique (SUBSONIC) ¹⁸
- 10** Sélecteur de mode (MODE) ¹⁸
- 11** Bouton de balance (BALANCE) ¹⁶
- 12** Sélecteur de chargement de cellule (CARTRIDGE LOAD) ¹⁸
- 13** Sélecteur de sortie d'enregistrement (REC OUT SELECTOR) ²⁰
- 14** Boutons des graves et des aigus (BASS, TREBLE) et sélecteurs de fréquence de Nyquist (TURNOVER) ¹⁶
- 15** Commutateur de sortie (OUTPUT) ¹⁸
- 16** Prise casque (PHONES, téléphonique stéréo)

Function of Controls

Fonction des commandes



1 POWER switch

2 Tape deck or DAT deck control section

DECK A/B selector: Selects DECK A or B to be controlled.

◀◀/▶▶: Locates a desired selection. (AMS) (only for deck B)

▶/▶: Play

◀◀/▶▶: Fast winding

■: Stop

⏸: Pause

○: Record muting

●: Recording

3 Tuner or CD control section

TUNER/CD selector: Selects TUNER or CD to be controlled.

BAND button: Selects the band for a preset station. (only for tuner)

SHIFT and PRESET buttons: Selects a preset station. (only for tuner)

Preset or program number (1 to 9, 0/10, and >10) buttons: Selects a preset station (only for tuner) or track (only for CD player).

◀◀/▶▶: Locates a desired selection. (only for CD player)

▶: Starts play. (only for CD player)

■: Stops play. (only for CD player)

⏸: Pause (only for CD player)

4 Control amplifier section

Function selectors: Select an input source of the control amplifier.

ATTENUATOR +/- buttons: Control the attenuator of the control amplifier.

MUTING button: Mutes the sound.

1 Interrupteur d'alimentation (POWER)

2 Section platine-cassette ou platine DAT

Sélecteur de platine A/B (DECK A/B): Sélection de la platine A ou B à commander.

◀◀/▶▶: Localisation d'une plage (AMS) (platine B uniquement)

▶/▶: Lecture

◀◀/▶▶: Bobinage rapide

■: Arrêt

⏸: Pause

○: Silencieux d'enregistrement

●: Enregistrement

3 Section tuner ou lecteur CD

Sélecteur de tuner/lecteur CD (TUNER/CD): Sélection du lecteur CD ou du tuner à commander.

Touche de gamme (BAND): Sélection de la gamme pour une station présélectionnée (tuner uniquement).

Touches de décalage et de présélection (SHIFT, PRESET): Sélection d'une station présélectionnée (tuner uniquement).

Touches numériques de présélection ou de plage (1 à 9, 0/10, et >10): Sélection d'une station présélectionnée (tuner uniquement) ou d'une plage (lecteur CD uniquement).

◀◀/▶▶: Localisation d'une plage donnée (lecteur CD uniquement)

▶: Lecture (lecteur CD uniquement)

■: Arrêt de la lecture (lecteur CD uniquement)

⏸: Pause (lecteur CD uniquement)

4 Section amplificateur de contrôle

Sélecteurs de fonction: Sélection d'une source d'entrée de l'amplificateur de contrôle.

Touches d'atténuation (ATTENUATOR +/-): Réglage d'atténuation de l'amplificateur de contrôle.

Touche d'assourdissement (MUTING): Assourdissement du son.

System Connections

Connexions du système

Connection Notes

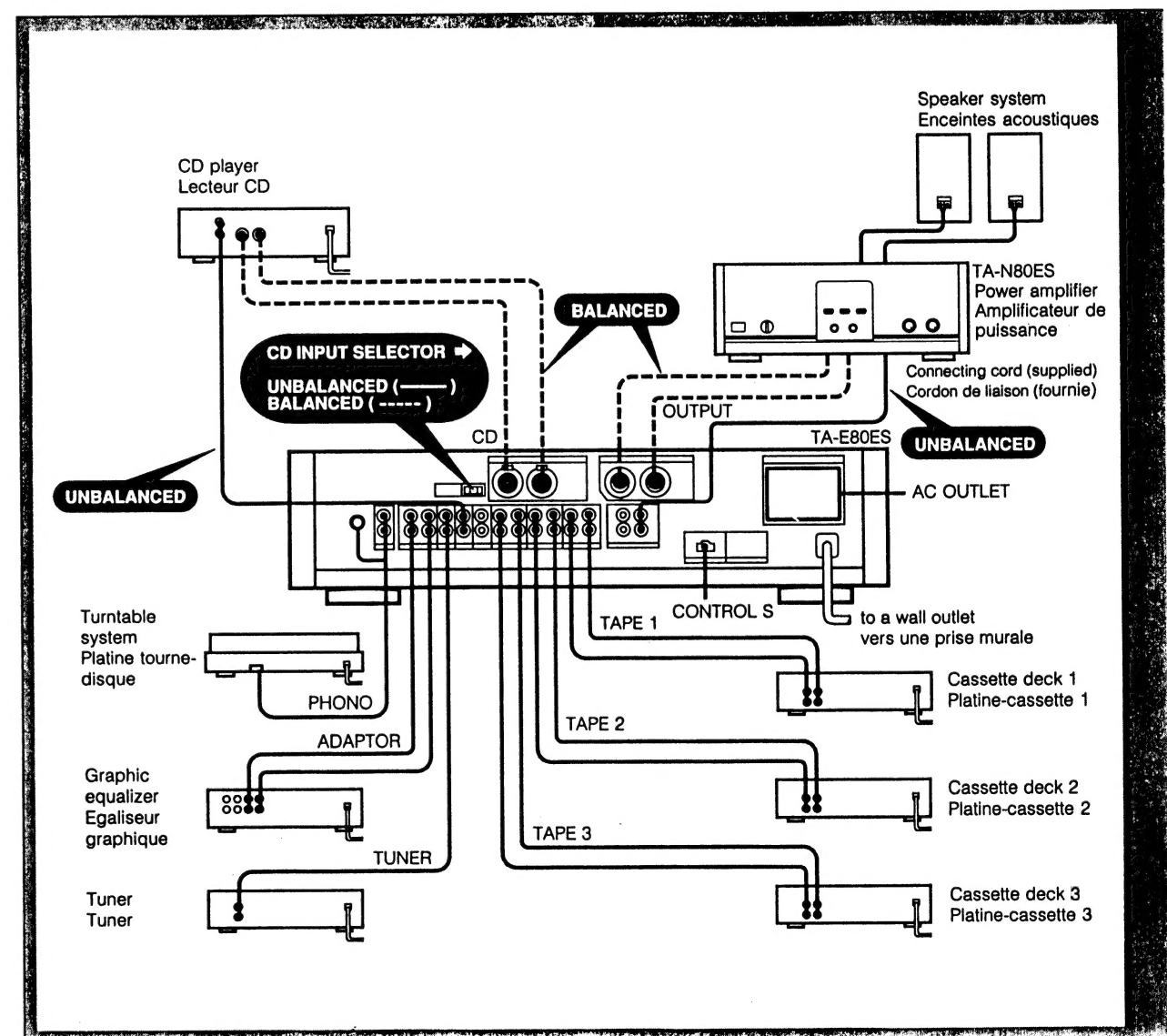
- The power cord should be connected last of all, first making sure that the POWER switch is turned off.
- Cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Cord plugs and jacks are color coded. Red plugs and jacks are for the right channel (R) and white ones are for the left channel (L).

Remarques sur les connexions

- Le cordon d'alimentation doit être raccordé en dernier, en s'assurant au préalable que l'interrupteur POWER est sur OFF.
- Les câbles de connexions doivent être entièrement insérés dans les prises, une connexion relâchée pouvant être la cause de bruit et de ronflement.
- Les fiches et prises des cordons sont codées avec une couleur. Les fiches et prises rouges sont destinées au canal droit et les blanches au canal gauche.

Connection Diagram

Schéma des connexions



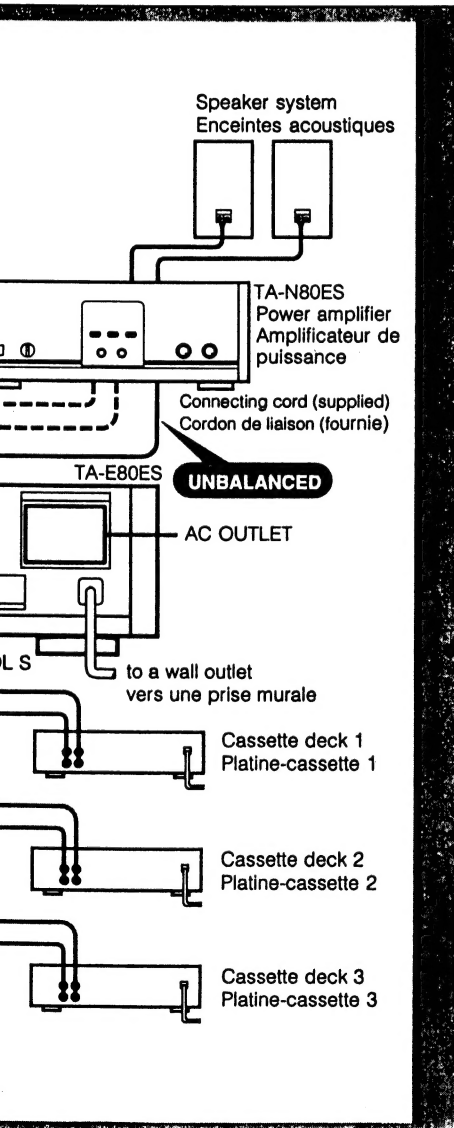
Connexions du système

sur les connexions

l'alimentation doit être raccordé en dernier, au préalable que l'interrupteur POWER est

les connexions doivent être entièrement les prises, une connexion relâchée pouvant de bruit et de ronflement. prises des cordons sont cordés avec une fiches et prises rouges sont destinées au les blanches au canal gauche.

connexions



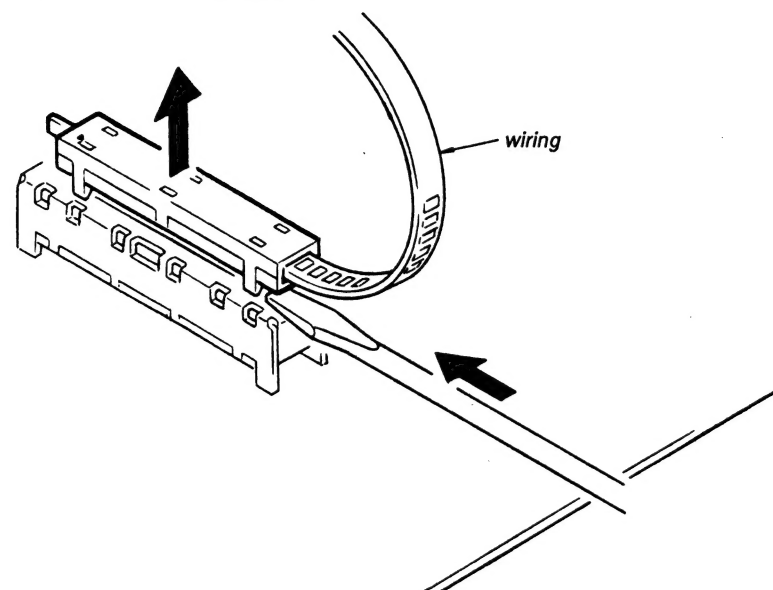
SECTION 2 DISASSEMBLY

NOTE ON REPAIRING DISASSEMBLY AND ASSEMBLY FOR SWITCH SECTION

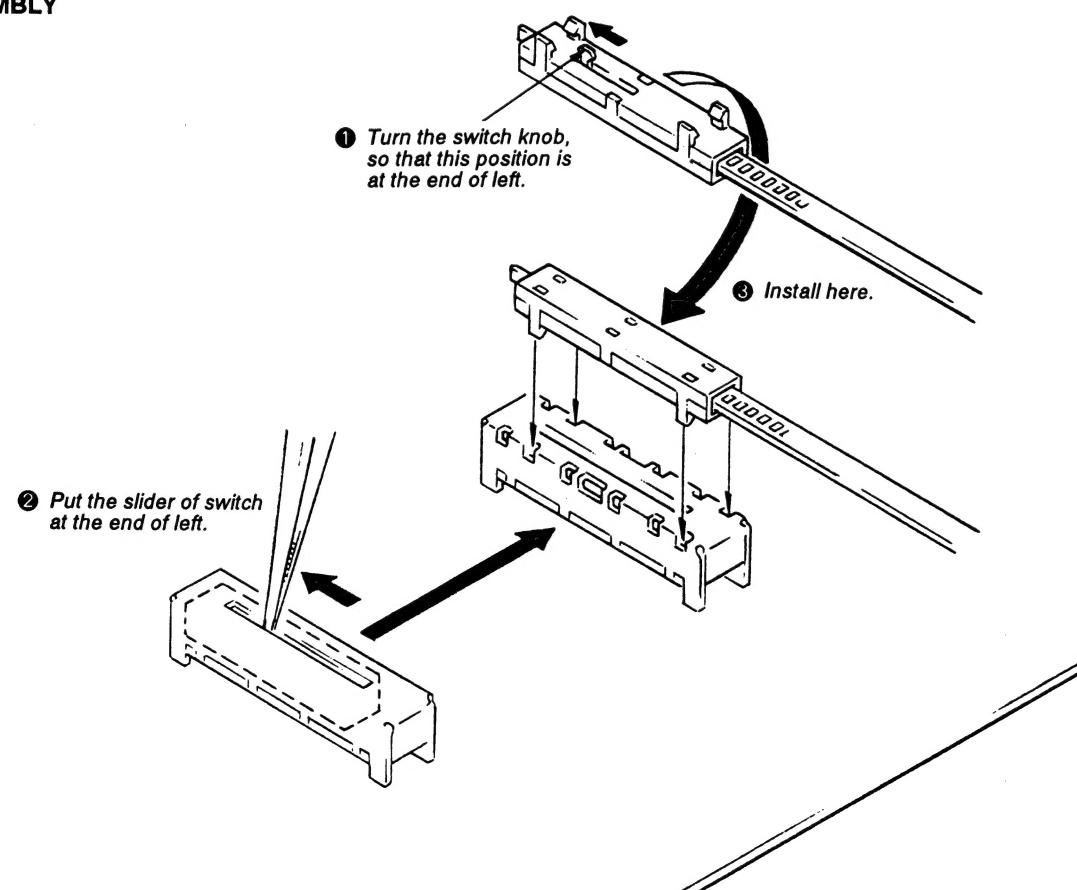
Note: Follow the disassembly procedure in the numerical order given.

DISASSEMBLY

Insert in the screwdriver and remote the wiring as illustrated below.
CAUTION: Don't pull the wiring. It causes the wiring damage.



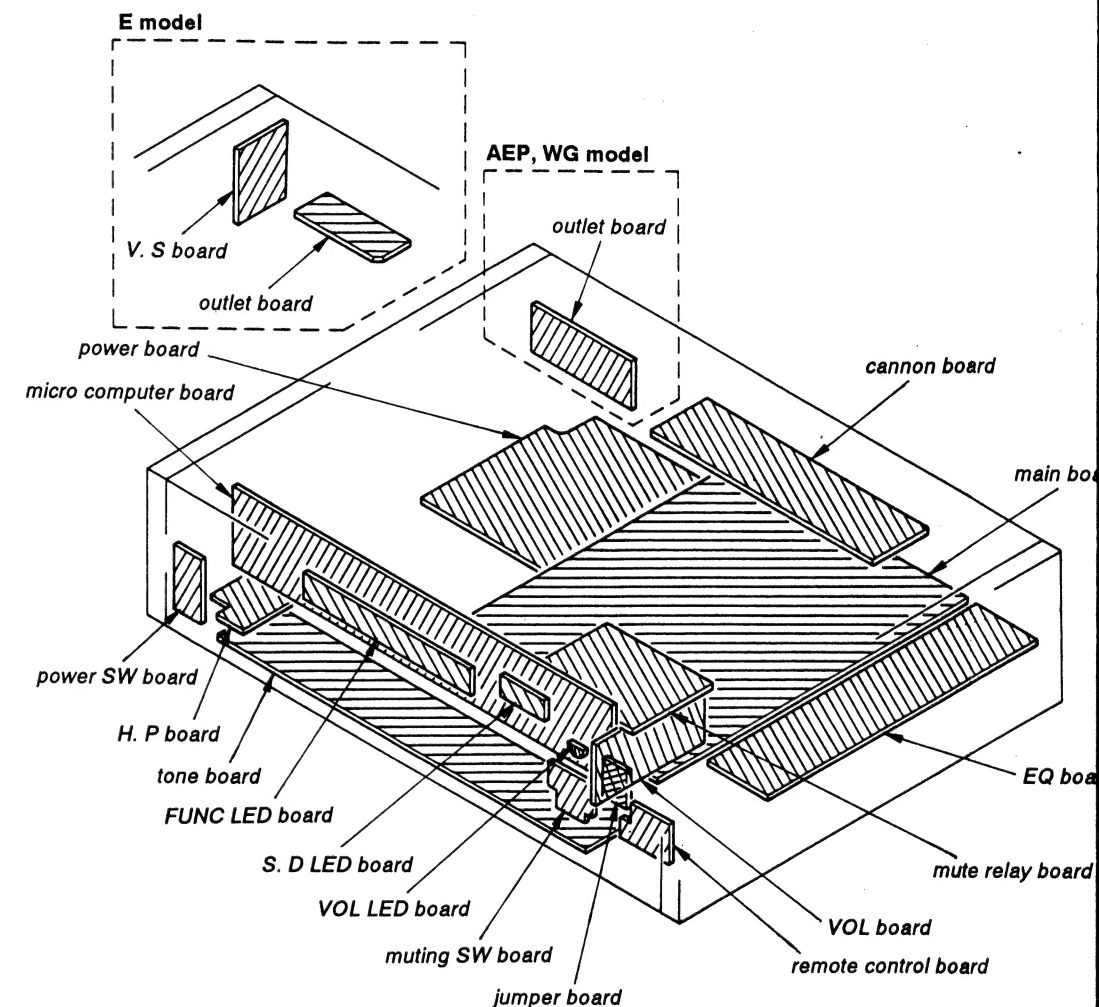
ASSEMBLY



SECTION 3 DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION

• WG: West Germany



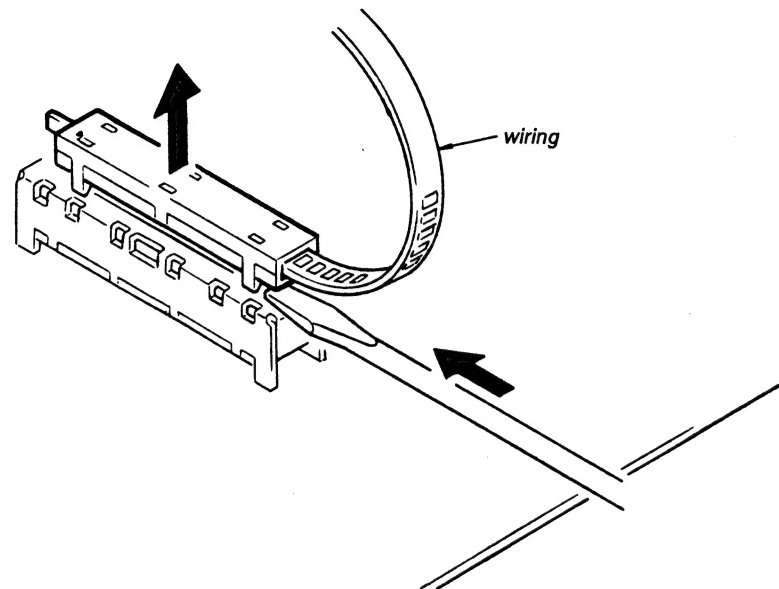
SECTION 2 DISASSEMBLY

PAIRING

Y AND ASSEMBLY FOR SWITCH SECTION

disassembly procedure in the numerical order given.

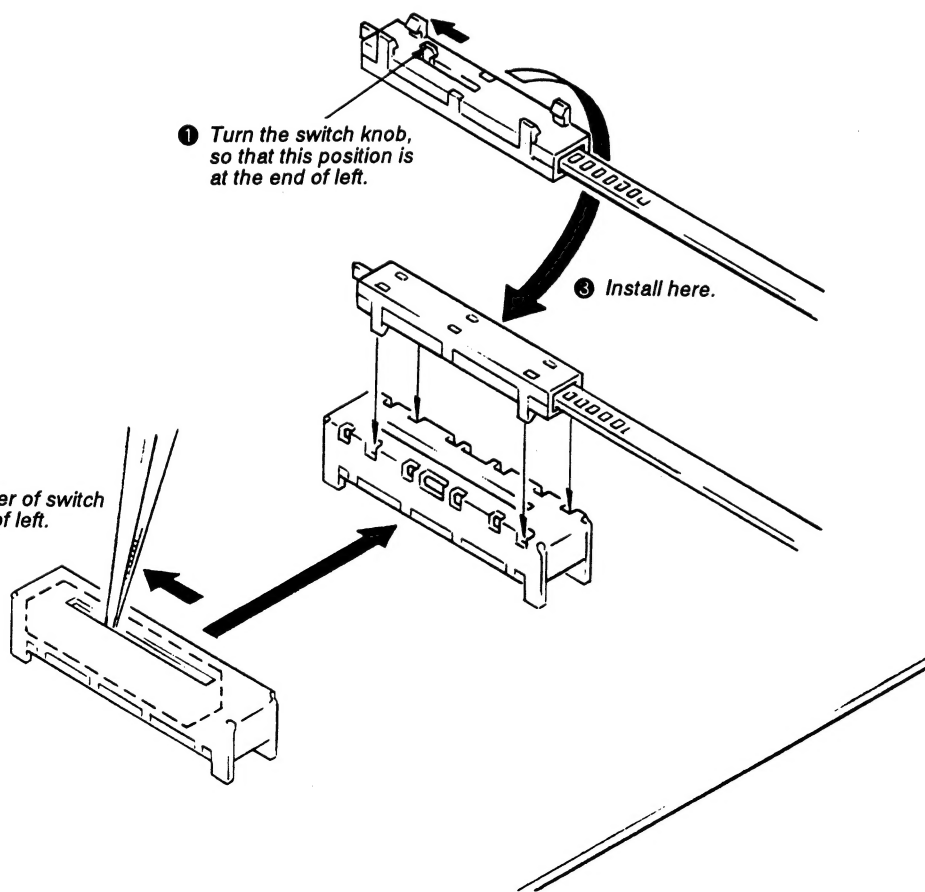
driver and remote the wiring as illustrated below.
pull the wiring. It causes the wiring damage.



1 Turn the switch knob, so that this position is at the end of left.

3 Install here.

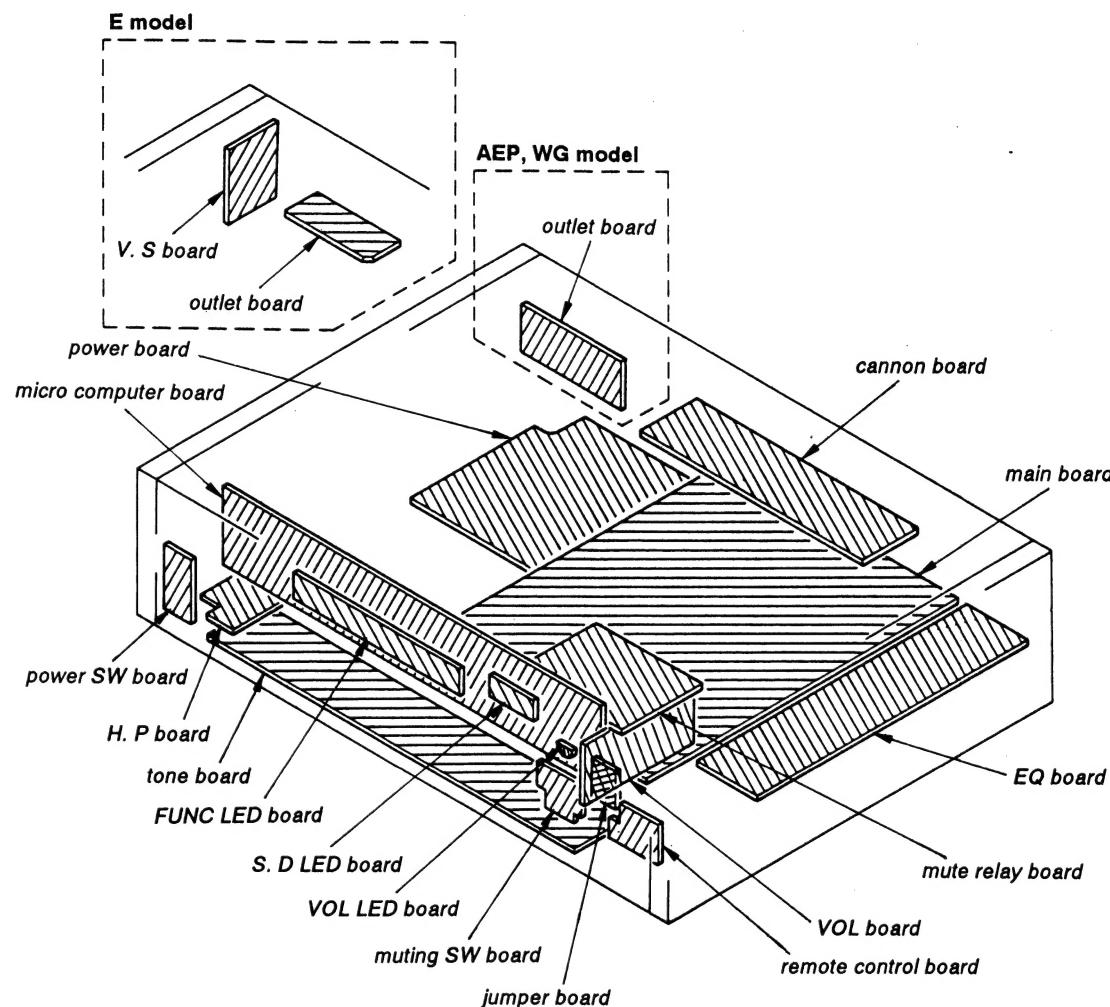
the slider of switch end of left.



SECTION 3 DIAGRAMS

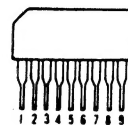
3-1. CIRCUIT BOARDS LOCATION

• WG: West Germany

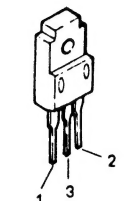


3-2. SEMICONDUCTOR LEAD LAYOUTS

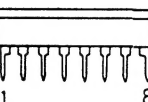
BA6208



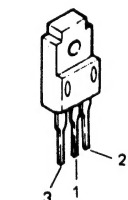
M5F7806L
RC7815FA



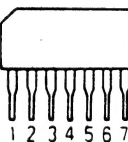
M5238L



RC7915FA



μ PA68HA-M



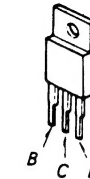
DTA114ES
DTC114ES
DTC124ES
2SA1175-FEK
2SC2603-EF



2SA733-QP
2SC945-P



2SA985A
2SC2275-P



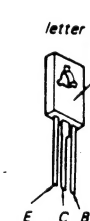
2SA1360
2SC1941-LK
2SC3423



2SC2785-HFE



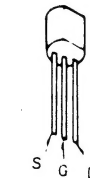
2SC3601



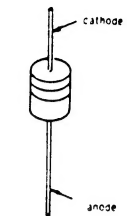
2SD774-34



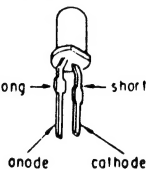
2SK147-V
2SK246-GR2



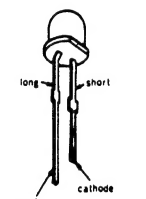
HZS6B1L
UZ-10BSC
1SS120
11ES2



SEL2210S-C
SEL2810A-C



SEL2510C

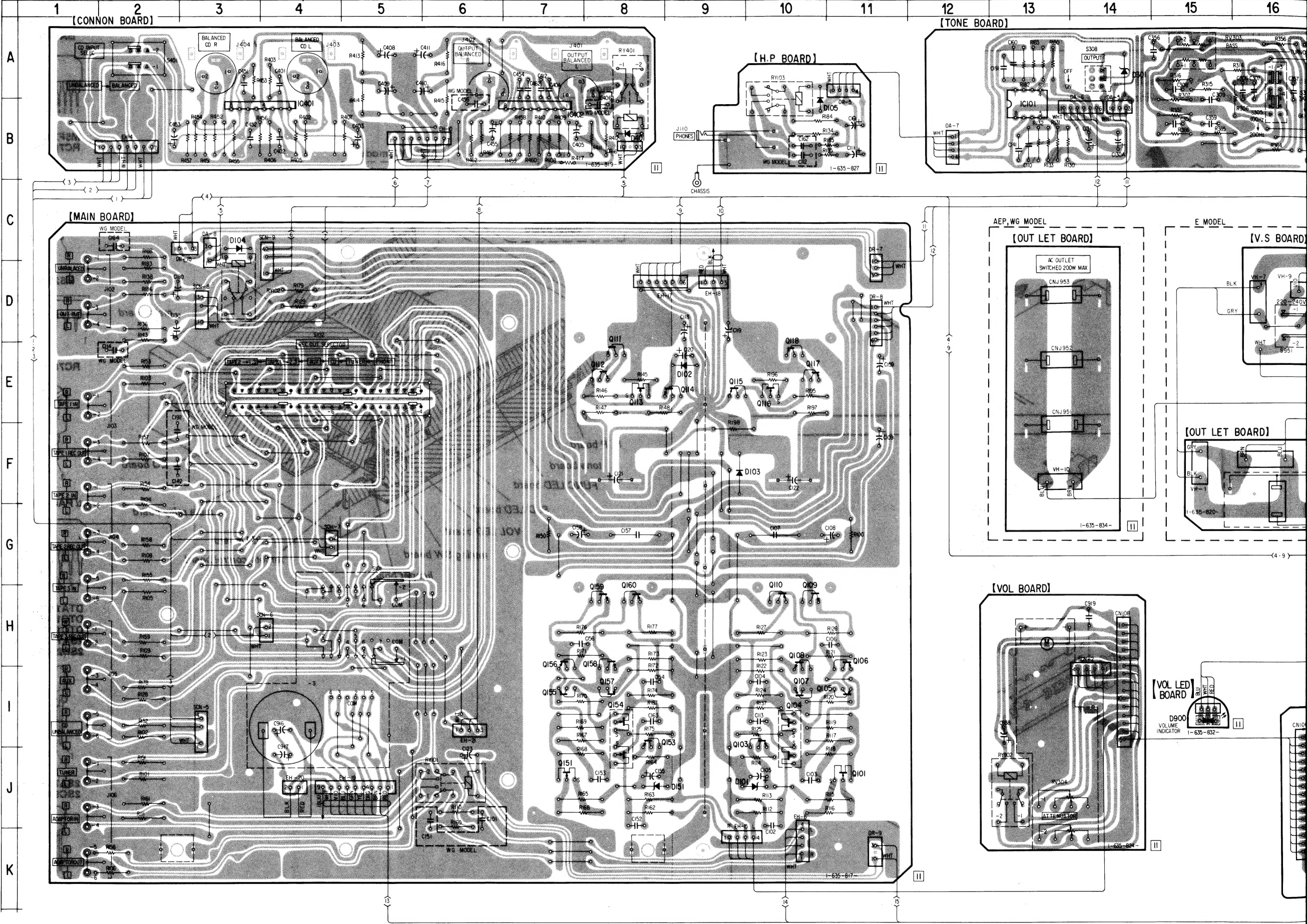
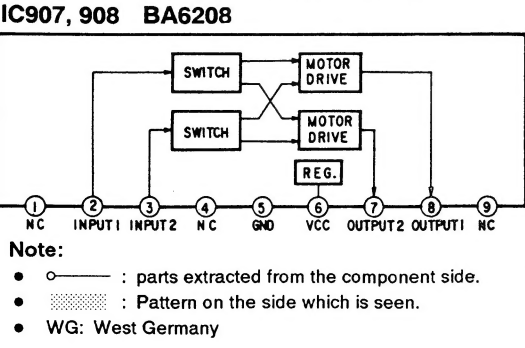


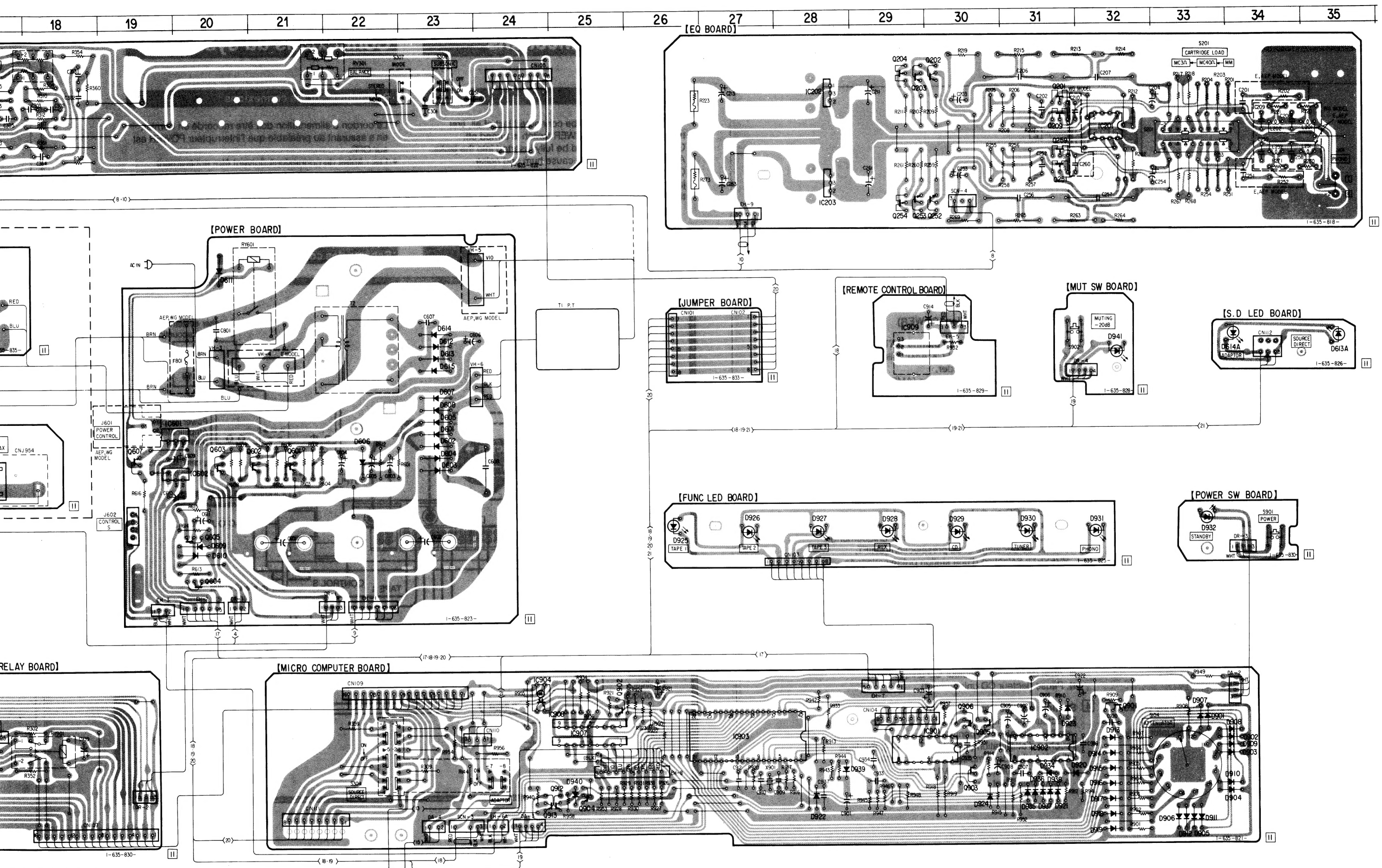
3-3. PRINTED WIRING BOARDS

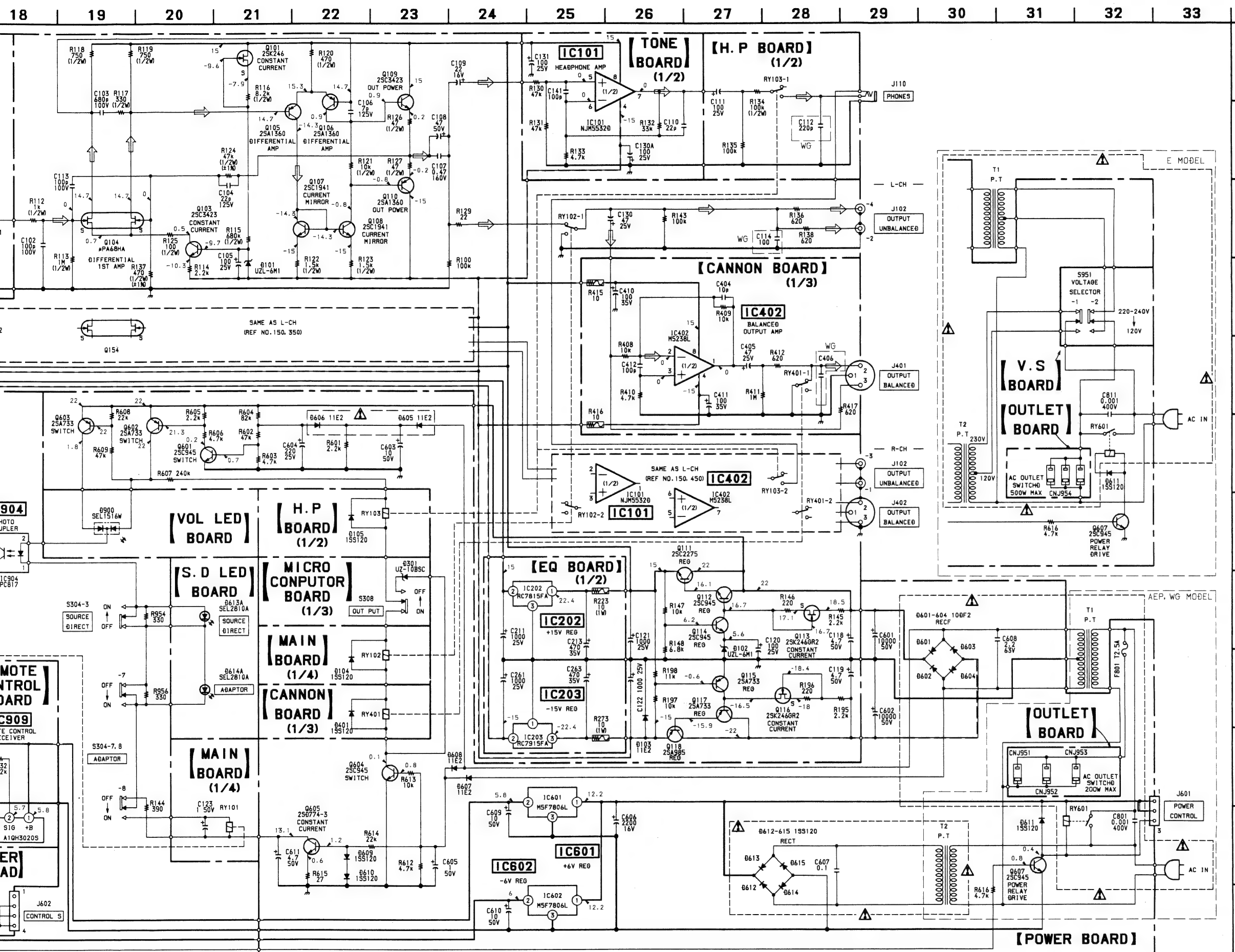
- See page 9 for Semiconductor Lead Layouts
- See page 8 for Circuit Boards Location.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	J-10	IC101	B-13
D102	E-9	IC201	B-32
D103	F-9	IC202	A-28
D104	C-3	IC203	C-28
D105	B-10	IC401	B-4
D151	J-8	IC402	B-7
D301	A-14	IC601	F-19
D401	B-8	IC602	F-19
D601	F-23	IC901	J-29
D602	F-23	IC902	J-30
D603	F-23	IC903	J-27
D604	F-23	IC904	I-24
D605	F-23	IC907	J-25
D606	F-22	IC908	J-25
D607	E-23	IC909	E-29
D608	F-23		
D609	G-20	Q101	J-11
D610	G-20	Q103	I-10
D611	D-20	Q104	I-10
D612	E-23	Q105	I-11
D613B	E-23	Q106	H-11
D613A	E-34	Q107	I-10
D614B	E-23	Q108	H-10
D614A	E-33	Q109	H-10
D615	E-23	Q110	H-10
D900	I-15	Q111	E-8
D901	J-33	Q112	E-8
D902	J-33	Q113	E-8
D903	J-33	Q114	E-9
D904	K-33	Q115	E-9
D905	K-33	Q116	E-10
D906	K-33	Q117	E-10
D907	J-33	Q118	E-10
D908	J-33	Q151	J-7
D909	J-33	Q153	I-8
D910	K-33	Q154	I-8
D911	K-33	Q155	I-7
D912	K-33	Q156	H-7
D913	J-32	Q157	I-8
D914	J-32	Q158	H-8
D915	J-32	Q159	H-8
D916	K-32	Q160	H-8
D917	K-32	Q201	A-31
D918	K-32	Q202	A-30
D919	K-32	Q203	A-29
D920	J-31	Q204	A-29
D921	K-31	Q209	B-31
D922	K-28	Q251	B-31
D923	J-31	Q252	C-30
D924	K-30	Q253	C-29
D925	G-26	Q254	C-29
D926	G-27	Q259	B-31
D927	G-28	Q601	F-21
D928	G-29	Q602	F-21
D929	G-30	Q603	F-20
D930	G-31	Q604	H-20
D931	G-32	Q605	G-20
D932	G-33	Q607	F-19
D934	J-31	Q901	J-32
D935	K-31	Q902	J-25
D936	K-31	Q903	K-29
D937	K-31	Q904	K-25
D938	K-31	Q905	J-30
D939	J-28	Q906	J-30
D940	K-25	Q912	K-24
D941	E-32	Q913	K-24









SECTION 4 EXPLODED VIEWS

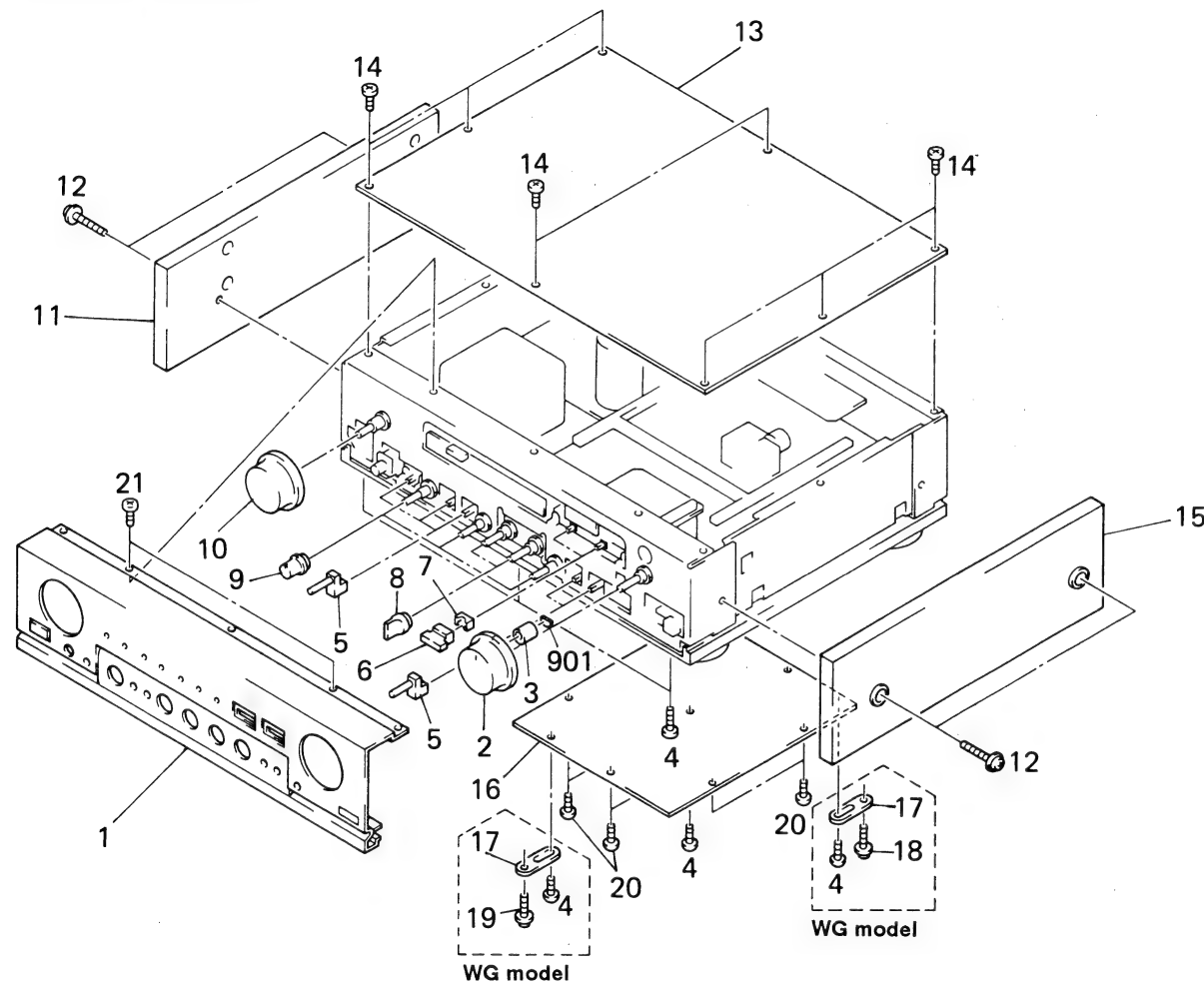
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts Color
- WG: West Germany

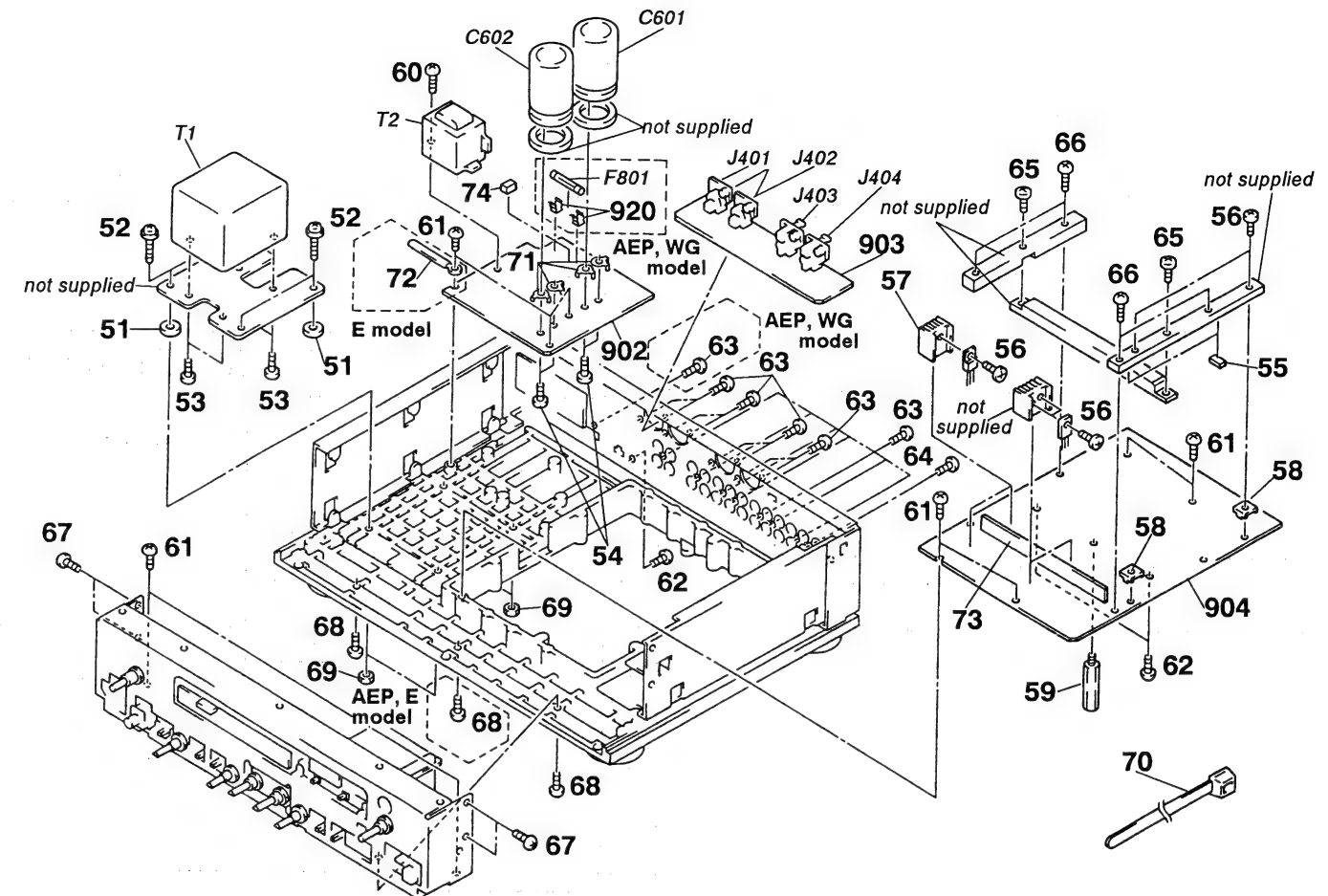
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.







(1) CABINET SECTION





No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	A-4323-678-A	PANEL ASSY, FRONT		12	4-885-979-11	SCREW (4X25)	
2	X-4922-213-1	KNOB (VOL) ASSY		13	4-922-238-11	PLATE, TOP	
3	*4-901-919-00	HOUSE, LED LAMP		14	4-921-439-01	SCREW (M3X8), FLAT HEAD	
4	7-682-547-09	SCREW +BVTT 3X6 (S)		15	X-4922-216-1	(AEP,E)...PANEL (R) ASSY, SIDE	
5	4-923-879-01	BUTTON (DIA.4)			X-4922-218-1	(WG).....PANEL (R) ASSY, SIDE	
6	4-915-338-11	KNOB, SQUARE		16	*4-922-227-01	PLATE, BOTTOM	
7	4-864-307-00	RING		17	*4-941-988-01	(WG)...BRACKET (GROUND)	
8	4-922-265-01	KNOB (FLAT-16)		18	4-921-437-01	(WG)...SCREW (M3X20), TAPPING	
9	4-922-266-01	KNOB (ROUND-16)		19	7-685-648-79	(WG)...SCREW TAPPING	
10	4-922-264-01	KNOB (FUN)		20	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT	
11	X-4922-215-1	(AEP,E)...PANEL (L) ASSY, SIDE		21	7-682-548-09	SCREW +B 3X8	
	X-4922-217-1	(WG).....PANEL (L) ASSY, SIDE		901	*1-635-832-11	PC BOARD, VOL LED	

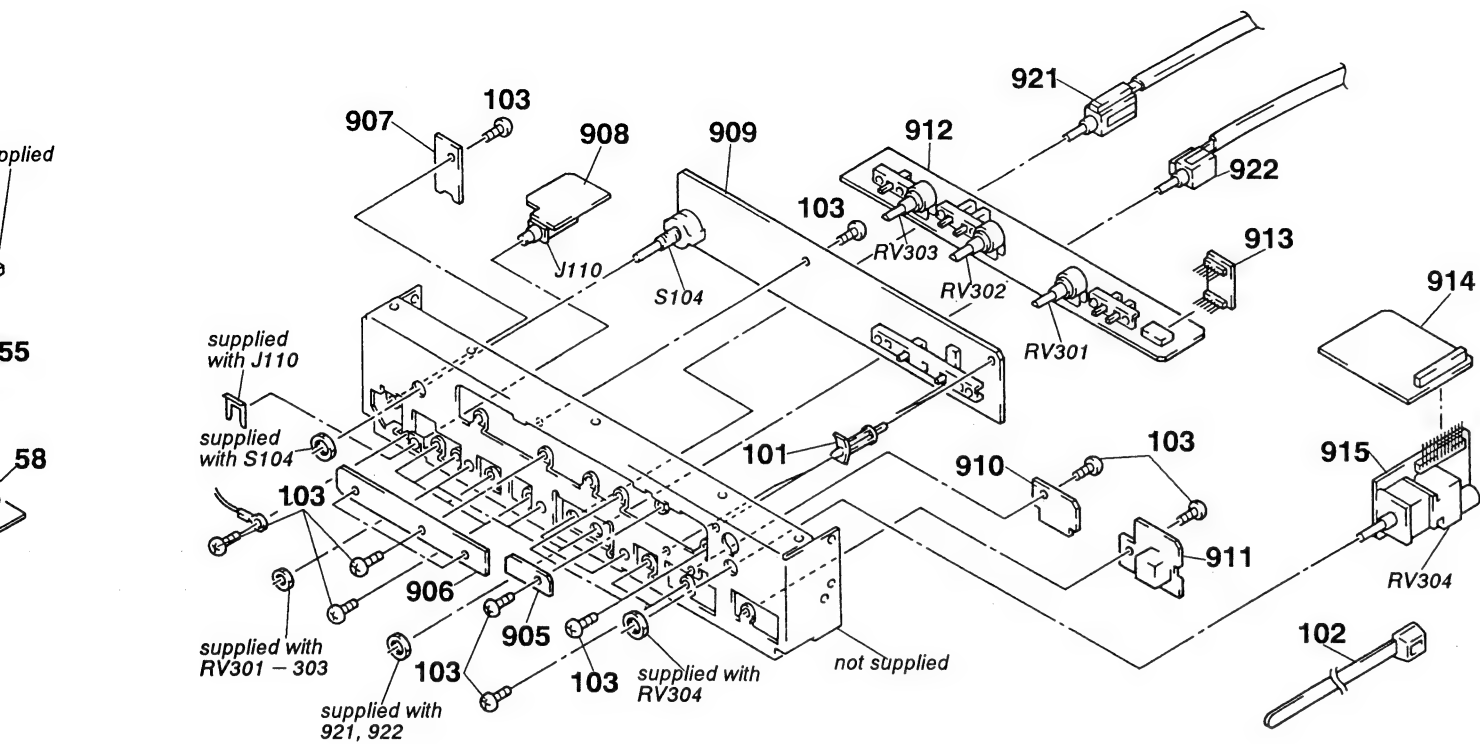
(2) MAIN BOARD SECTION



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	4-931-976-01	WASHER (BS)		902	*A-4341-159-A	(AEP,WG)...MOUNTED PCB, POWER 71,920,T2	
52	7-682-566-09	SCREW +B 4X20			*A-4341-173-A	(E).....MOUNTED PCB, POWER 71,T2	
53	7-682-561-09	SCREW +B 4X8		903	*A-4341-156-A	(AEP,E)...MOUNTED PCB, CANNON J401-404	
54	*4-931-964-01	SCREW (M4X6)			*A-4341-177-A	(WG).....MOUNTED PCB, CANNON J401-404	
55	*4-024-242-21	CUSHION, LID		904	*A-4341-154-A	(AEP,E)...MOUNTED PCB, MAIN 56-58,73	
56	7-682-148-15	SCREW, TR			*A-4341-175-A	(WG).....MOUNTED PCB, MAIN 56-58,73	
57	*4-921-402-01	HEAT SINK		920	 *1-533-213-31	(AEP,WG)...HOLDER, FUSE	
58	4-924-264-01	TERMINAL, MOUNT		C601	1-125-640-11	CAP, ELECT 10000MF 20% 50V	
59	*4-906-052-21	SUPPORT (B)		C602	1-125-640-11	CAP, ELECT 10000MF 20% 50V	
60	7-685-649-79	SCREW +BVTP 3X14 TYPE2 SLIT		F801	 *1-532-286-00	(AEP,WG)...FUSE, TIME-LAG	
61	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT		J401	1-580-061-11	PLUG, CONNECTOR 3P	
62	7-682-547-09	SCREW +BVTT 3X6 (S)		J402	1-580-061-11	PLUG, CONNECTOR 3P	
63	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S		J403	1-580-060-11	RECEPTACLE, CONNECTOR 3P	
64	7-621-849-00	SCREW, TAPPING		J404	1-580-060-11	RECEPTACLE, CONNECTOR 3P	
65	7-682-548-09	SCREW +B 3X8		T1	 *1-450-182-11	(AEP,WG)...TRANSFORMER, POWER	
66	7-685-651-79	SCREW +BVTP 3X20 TYPE2 SLIT		T1	 *1-450-183-11	(E).....TRANSFORMER, POWER	
67	7-682-547-09	SCREW +BV 3X6, S TIGHT		T2	 *1-450-184-11	(AEP,WG)...TRANSFORMER, POWER	
68	7-682-549-09	SCREW +BVTT 3X10 (S)		T2	 *1-450-185-11	(E).....TRANSFORMER, POWER	
69	7-684-024-04	N 4, TYPE 2					
70	3-655-653-21	BAND (TAITON), BINDING					
71	*3-346-266-21	PLATE, GROUND					
72	*4-908-882-01	(E)...CLAMP					
73	*4-908-950-01	REINFORCEMENT (A), PWB					
74	*4-921-410-11	CUSHION					

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

(3) FRONT CHASSIS SECTION



Remarks

920, T2
71, T2

1-404
1-404

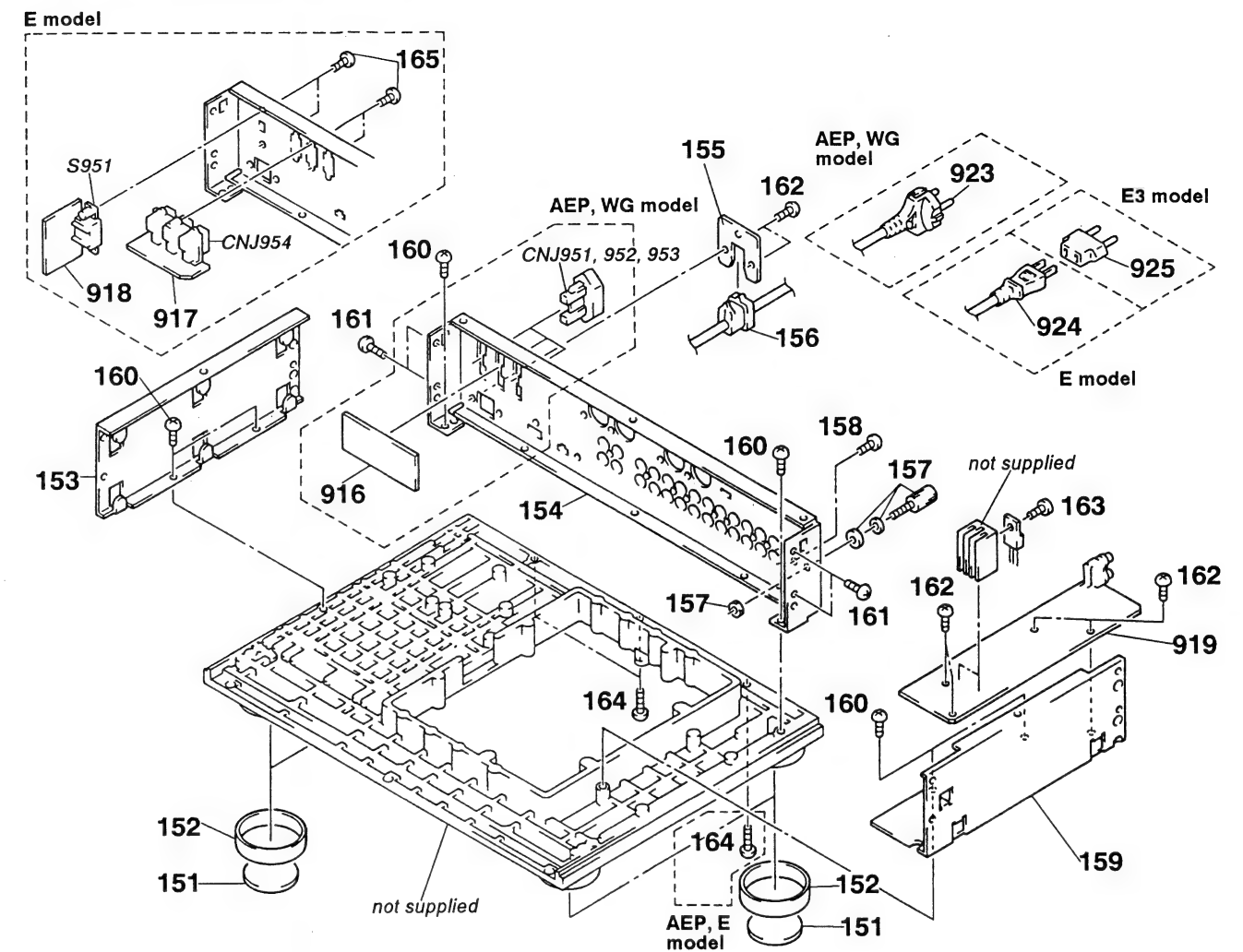
58, 73
58, 73

50V
50V

ed

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	*4-924-098-31	HOLDER, PC BOARD		913	*1-635-833-11	PC BOARD, JUMPER	
102	3-655-653-21	BAND (TAITON), BINDING		914	*1-635-830-11	PC BOARD, MUTE RELAY	
103	7-682-547-09	SCREW +BVTT 3X6 (S)		915	*1-635-824-11	PC BOARD, VOL	
905	*1-635-826-11	PC BOARD, S.D LED		921	1-572-431-11	SWITCH, ROTARY SLIDE (REMOTE)	
906	*1-635-825-11	PC BOARD, FUNC LED		922	1-572-430-11	SWITCH, ROTARY SLIDE (REMOTE)	
907	*1-635-830-11	PC BOARD, POWER SW		J110	1-507-796-71	JACK (PHONES)	
908	*1-635-827-11	PC BOARD, H.P		RV301	1-241-187-11	RES, VAR, CARBON 250K/250K (BALANCE)	
909	*A-4341-157-A	MOUNTED PCB, MICRO COMPUTER	S104	RV302	1-241-189-11	RES, VAR, CARBON 25K/100K (TREBLE)	
910	*1-635-828-11	PC BOARD, MUT SW		RV303	1-241-188-11	RES, VAR, CARBON 25K/250K (BASS)	
911	*1-635-829-11	PC BOARD, REMOTE CONTROL		RV304	1-241-186-11	RES, VAR, CARBON 60K/60K (ATTENUATOR)	
912	*A-4341-158-A	MOUNTED PCB, TONE	RV301-303	S104	1-572-095-11	SWITCH, ROTARY (ATTENUATOR)	

(4) MAIN CHASSIS SECTION



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
151	4-908-888-01	FOOT, TUNING		916	*1-635-834-11	(AEP, WG)...PC BOARD, OUT LET (AE)	
152	4-923-882-02	RING (LARGE-16), ORNAMENTAL, FOOT		917	*1-635-820-11	(E)...PC BOARD, OUTLET (E)	
153	*4-922-231-01	BRACKET, MICRO COMPUTER PCBOARD		918	*1-635-835-11	(E)...PC BOARD, V.S	
154	*4-922-260-01	(AEP, WG)...PANEL, BACK		919	*A-4341-155-A	(AEP, E)...MOUNTED PCB, EQ	163
	*4-922-260-12	(E).....PANEL, BACK			*A-4341-176-A	(WG).....MOUNTED PCB, EQ	163
155	*4-923-873-01	BRACKET, CORD STOPPER		923	*1-575-953-11	(AEP, WG)...CORD, POWER	
156	*2-352-626-01	BUSHING, CORD		924	*1-559-297-31	(E).....CORD, POWER	
157	*4-935-253-01	TERMINAL, SP		925	*1-569-007-11	(E3)...ADAPTOR, CONVERSION 2P	
158	7-621-849-00	SCREW, TAPPING					
159	*4-922-230-01	BRACKET, EQ PC BOARD					
160	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT					
161	7-682-547-09	SCREW +BV 3X6, S TIGHT					
162	7-685-751-09	SCREW +PTT 3X6 (S)					
163	7-682-148-15	SCREW, TR					
164	7-685-876-09	SCREW +BVTT 3X16 (S)					
165	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S					

Note: The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORSIn each case, U: μ , for example:UA...: μ A..., UPA...: μ PA...,UPC...: μ PC, UPD...: μ PD...

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- WG: West Germany

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
901	*1-635-832-11	PC BOARD, VOL LED	C119	1-123-369-00	ELECT 4.7MF 20% 50V
902	*A-4341-159-A	(AEP,WG)...MOUNTED PCB, POWER	C120	1-123-333-00	ELECT 100MF 20% 25V
	*A-4341-173-A	(E).....MOUNTED PCB, POWER	C121	1-125-641-11	ELECT 1000MF 20% 25V
903	*A-4341-156-A	(AEP,E)...MOUNTED PCB, CANNON	C122	1-125-641-11	ELECT 1000MF 20% 25V
	*A-4341-177-A	(WG).....MOUNTED PCB, CANNON	C123	1-126-044-11	ELECT 1MF 20% 50V
904	*A-4341-154-A	(AEP,E)...MOUNTED PCB, MAIN	C130	1-123-332-00	ELECT 47MF 20% 25V
	*A-4341-175-A	(WG).....MOUNTED PCB, MAIN	C130A	1-123-333-00	ELECT 100MF 20% 25V
905	*1-635-826-11	PC BOARD, S.D LED	C131	1-123-333-00	ELECT 100MF 20% 25V
906	*1-635-825-11	PC BOARD, FUNC LED	C141	1-162-282-31	CERAMIC 100PF 10% 50V
907	*1-635-830-11	PC BOARD, POWER SW	C142	1-136-808-11	(WG)...FILM 100PF 5% 100V
908	*1-635-827-11	PC BOARD, H.P	C151	1-136-808-11	(WG)...FILM 100PF 5% 100V
909	*A-4341-157-A	MOUNTED PCB, MICRO COMPUTER	C152	1-136-808-11	FILM 100PF 5% 100V
910	*1-635-828-11	PC BOARD, MUT SW	C153	1-136-813-11	FILM 680PF 5% 100V
911	*1-635-829-11	PC BOARD, REMOTE CONTROL	C154	1-104-327-11	POLYSTYRENE 22PF 10% 125V
912	*A-4341-158-A	MOUNTED PCB, TONE	C155	1-123-333-00	ELECT 100MF 20% 25V
913	*1-635-833-11	PC BOARD, JUMPER	C156	1-104-326-11	POLYSTYRENE 7PF 1PF 125V
914	*1-635-830-11	PC BOARD, MUTE RELAY	C157	1-136-962-11	FILM 0.47MF 10% 160V
915	*1-635-824-11	PC BOARD, VOL	C158	1-124-910-11	ELECT 47MF 20% 50V
916	*1-635-834-11	(AEP,WG)...PC BOARD, OUT LET (AE)	C159	1-123-330-00	ELECT 22MF 20% 16V
917	*1-635-820-11	(E)...PC BOARD, OUTLET (E)	C160	1-162-282-31	CERAMIC 100PF 5% 50V
918	*1-635-835-11	(E)...PC BOARD, V.S	C161	1-123-333-00	ELECT 100MF 20% 25V
919	*A-4341-155-A	(AEP,E)...MOUNTED PCB, EQ	C162	1-162-286-11	(WG)...CERAMIC 220PF 10% 50V
	*A-4341-176-A	(WG).....MOUNTED PCB, EQ	C163	1-110-335-11	MYLAR 100PF 5% 50V
920	Δ *1-533-213-31	(AEP,WG)...HOLDER, FUSE	C164	1-136-808-11	(WG)...FILM 100PF 5% 100V
921	1-572-431-11	SWITCH, ROTARY SLIDE (REMOTE)	C180	1-123-332-00	ELECT 47MF 20% 25V
922	1-572-430-11	SWITCH, ROTARY SLIDE (REMOTE)	C191	1-162-282-31	CERAMIC 100PF 10% 50V
923	Δ 1-575-953-11	(AEP,WG)...CORD, POWER	C192	1-136-808-11	(WG)...FILM 100PF 5% 100V
924	Δ 1-559-297-31	(E).....CORD, POWER	C201	1-136-811-11	(AEP,E)...FILM 330PF 5% 100V
925	Δ 1-569-007-11	(E3)...ADAPTOR, CONVERSION 2P	C202	1-130-487-00	MYLAR 0.022MF 5% 50V
C101	1-136-808-11	(WG)...FILM 100PF 5% 100V	C203	1-124-748-11	ELECT 22MF 20% 100V
C102	1-136-808-11	FILM 100PF 5% 100V	C204	1-124-130-00	ELECT 100MF 20% 63V
C103	1-136-813-11	FILM 680PF 5% 100V	C206	1-136-304-11	FILM 0.016MF 2% 0
C104	1-104-327-11	POLYSTYRENE 22PF 10% 125V	C207	1-136-305-11	FILM 0.056MF 2% 0
C105	1-123-333-00	ELECT 100MF 20% 25V	C208	1-162-283-11	(WG)...CERAMIC 120PF 10% 50V
C106	1-104-326-11	POLYSTYRENE 7PF 1PF 125V	C209	1-162-282-11	(WG)...CERAMIC 100PF 10% 50V
C107	1-136-962-11	FILM 0.47MF 10% 160V	C210	1-110-335-11	(WG)...FILM 100PF 5% 50V
C108	1-124-910-11	ELECT 47MF 20% 50V	C211	1-124-557-11	ELECT 1000MF 20% 25V
C109	1-123-330-00	ELECT 22MF 20% 16V	C213	1-124-713-11	ELECT 470MF 20% 35V
C110	1-161-263-11	CERAMIC 22PF 5% 50V	C251	1-136-811-11	(AEP,E)...FILM 330PF 5% 100V
C111	1-123-333-00	ELECT 100MF 20% 25V	C252	1-130-487-00	MYLAR 0.022MF 5% 50V
C112	1-162-286-11	(WG)...CERAMIC 220PF 10% 50V	C253	1-124-748-11	ELECT 22MF 20% 100V
C113	1-110-335-11	MYLAR 100PF 5% 50V	C254	1-124-130-00	ELECT 100MF 20% 63V
C114	1-136-808-11	(WG)...FILM 100PF 5% 100V	C256	1-136-304-11	FILM 0.016MF 2% 0
C118	1-123-369-00	ELECT 4.7MF 20% 50V	C257	1-136-305-11	FILM 0.056MF 2% 0

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
C258	1-162-283-11	(WG)...CERAMIC 120PF	10%	50V		C903	1-124-927-11	ELECT	4.7MF	20%	50V
C259	1-162-282-11	(WG)...CERAMIC 100PF	10%	50V		C905	1-123-875-11	ELECT	10MF	20%	50V
C260	1-110-335-11	(WG)...FILM 100PF	5%	50V		C906	1-126-233-11	ELECT	22MF	20%	25V
C261	1-124-557-11	ELECT	1000MF	20%	25V	C907	1-136-161-00	FILM	0.047MF	5%	50V
C263	1-124-713-11	ELECT	470MF	20%	35V	C908	1-126-096-11	ELECT	10MF	20%	35V
C301	1-136-172-00	FILM	0.39MF	5%	50V	C909	1-102-963-00	CERAMIC	33PF	5%	50V
C302	1-130-477-00	MYLAR	0.0033MF	5%	50V	C910	1-102-963-00	CERAMIC	33PF	5%	50V
C303	1-130-477-00	MYLAR	0.0033MF	5%	50V	C912	1-161-379-00	CERAMIC	0.01MF	30%	16V
C304	1-130-485-00	MYLAR	0.015MF	5%	50V	C914	1-126-022-11	ELECT	47MF	20%	10V
C305	1-130-485-00	MYLAR	0.015MF	5%	50V	C916	1-124-045-00	ELECT	4.7MF	20%	50V
C306	1-130-487-00	MYLAR	0.022MF	5%	50V	C917	1-124-045-00	ELECT	4.7MF	20%	50V
C307	1-130-487-00	MYLAR	0.022MF	5%	50V	C919	1-124-273-00	ELECT	3.3MF	20%	50V
C308	1-136-167-00	FILM	0.15MF	5%	50V	C920	1-136-165-00	FILM	0.1MF	5%	50V
C309	1-136-167-00	FILM	0.15MF	5%	50V	C921	1-123-875-11	ELECT	10MF	20%	50V
C331	1-162-282-11	(WG)...CERAMIC 100PF	10%	50V	C922	1-123-875-11	ELECT	10MF	20%	50V	
C351	1-136-172-00	FILM	0.39MF	5%	50V	C933	1-136-165-00	FILM	0.1MF	5%	50V
C352	1-130-477-00	MYLAR	0.0033MF	5%	50V	C934	1-136-165-00	FILM	0.1MF	5%	50V
C353	1-130-477-00	MYLAR	0.0033MF	5%	50V	C935	1-161-379-00	CERAMIC	0.01MF	30%	16V
C354	1-130-485-00	MYLAR	0.015MF	5%	50V	C936	1-161-379-00	CERAMIC	0.01MF	30%	16V
C355	1-130-485-00	MYLAR	0.015MF	5%	50V	C937	1-161-379-00	CERAMIC	0.01MF	30%	16V
C356	1-130-487-00	MYLAR	0.022MF	5%	50V	C938	1-124-791-11	ELECT	1MF	20%	50V
C357	1-130-487-00	MYLAR	0.022MF	5%	50V	C939	1-124-791-11	ELECT	1MF	20%	50V
C358	1-136-167-00	FILM	0.15MF	5%	50V	CN101	*1-564-599-11	PIN, CONNECTOR 8P			
C359	1-136-167-00	FILM	0.15MF	5%	50V	CN102	*1-564-599-11	PIN, CONNECTOR 8P			
						CN103	*1-562-573-11	SOCKET, CONNECTOR 8P			
C381	1-162-282-11	(WG)...CERAMIC 100PF	10%	50V		CN104	*1-566-878-11	PIN, CONNECTOR (PC BOARD) 8P			
C401	1-107-202-00	MICA 10PF	0.5PF	500V		CN105	*1-565-484-11	CONNECTOR, BOARD TO BOARD 8P			
C402	1-107-202-00	MICA 10PF	0.5PF	500V		CN106	1-568-118-11	SOCKET, CONNECTOR 16P			
C403	1-123-356-00	ELECT	10MF	20%	25V	CN107	*1-568-204-11	PIN, CONNECTOR (PC BOARD) 16P			
C404	1-162-199-31	CERAMIC	10PF	5%	50V	CN109	1-568-118-11	SOCKET, CONNECTOR 16P			
C405	1-123-332-00	ELECT	47MF	20%	25V	CN108	*1-568-204-11	PIN, CONNECTOR (PC BOARD) 16P			
C406	1-136-808-11	(WG)...FILM 100PF	5%	100V		CN110	1-568-577-11	PIN, CONNECTOR (PC BOARD) 3P			
C408	1-123-345-00	ELECT	100MF	20%	35V	CN111	*1-562-573-11	SOCKET, CONNECTOR 8P			
C409	1-123-345-00	ELECT	100MF	20%	35V	CN112	*1-565-835-11	SOCKET, CONNECTOR 3P			
C410	1-123-345-00	ELECT	100MF	20%	35V	△CNJ951.1-526-794-11	(AEP,WG)...OUTLET, AC				
C411	1-123-345-00	ELECT	100MF	20%	35V	△CNJ952.1-526-794-11	(AEP,WG)...OUTLET, AC				
C412	1-162-282-31	CERAMIC	100PF	10%	50V	△CNJ953.1-526-794-11	(AEP,WG)...OUTLET, AC				
C451	1-107-202-00	MICA 10PF	0.5PF	500V		△CNJ954.1-540-043-11	(E)...OUTLET, AC (NONPLAR)(3P)				
C452	1-107-202-00	MICA 10PF	0.5PF	500V		D101	8-719-933-36	DIODE HZS6B1L			
C453	1-123-356-00	ELECT	10MF	20%	25V	D102	8-719-933-36	DIODE HZS6B1L			
						D103	8-719-200-82	DIODE 11ES2			
C454	1-162-199-31	CERAMIC	10PF	5%	50V	D104	8-719-912-20	DIODE 1SS120			
C455	1-123-332-00	ELECT	47MF	20%	25V	D105	8-719-912-20	DIODE 1SS120			
C456	1-136-808-11	(WG)...FILM 100PF	5%	100V		D151	8-719-933-36	DIODE HZS6B1L			
C462	1-162-282-31	CERAMIC	100PF	10%	50V	D301	8-719-011-93	DIODE UZ-10BSC			
C601	1-125-640-11	ELECT	10000MF	20%	50V	D401	8-719-912-20	DIODE 1SS120			
C602	1-125-640-11	ELECT	10000MF	20%	50V	D601	△.8-719-911-55	DIODE U05G			
C603	1-126-059-11	ELECT	10MF	20%	50V	D602	△.8-719-911-55	DIODE U05G			
C604	1-126-024-11	ELECT	220MF	20%	25V	D603	△.8-719-911-55	DIODE U05G			
C605	1-126-044-11	ELECT	1MF	20%	50V	D604	△.8-719-911-55	DIODE U05G			
C606	1-124-556-11	ELECT	2200MF	20%	16V	D605	△.8-719-200-82	DIODE 11ES2			
C607	△.1-136-165-00	FILM	0.1MF	5%	50V	D606	△.8-719-200-82	DIODE 11ES2			
C608	△.1-137-168-11	FILM	2.2MF	10%	63V	D607	8-719-200-82	DIODE 11ES2			
C609	1-126-059-11	ELECT	10MF	20%	50V	D608	8-719-200-82	DIODE 11ES2			
C610	1-126-059-11	ELECT	10MF	20%	50V	D609	8-719-912-20	DIODE 1SS120			
C611	1-124-927-11	ELECT	4.7MF	20%	50V	D610	8-719-912-20	DIODE 1SS120			
C801	△.1-161-741-00	CERAMIC	0.001MF	10%	400V						
C901	1-125-548-11	ELECT	0.1F	5.5V							
C902	1-124-927-11	ELECT	4.7MF	20%	50V						

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description
D611	8-719-912-20	DIODE 1SS120
D612	<u>Δ</u> 8-719-200-82	DIODE 11ES2
D613	<u>Δ</u> 8-719-200-82	DIODE 11ES2
D613A	8-719-301-52	DIODE SEL2810A-C
D614	<u>Δ</u> 8-719-200-82	DIODE 11ES2
D614A	8-719-301-52	DIODE SEL2810A-C
D615	8-719-200-82	DIODE 11ES2
D900	8-719-313-40	DIODE SEL1516W
D901	8-719-912-20	DIODE 1SS120
D902	8-719-912-20	DIODE 1SS120
D903	8-719-912-20	DIODE 1SS120
D904	8-719-912-20	DIODE 1SS120
D905	8-719-912-20	DIODE 1SS120
D906	8-719-912-20	DIODE 1SS120
D907	8-719-912-20	DIODE 1SS120
D908	8-719-912-20	DIODE 1SS120
D909	8-719-912-20	DIODE 1SS120
D910	8-719-912-20	DIODE 1SS120
D911	8-719-912-20	DIODE 1SS120
D912	8-719-912-20	DIODE 1SS120
D913	8-719-912-20	DIODE 1SS120
D914	8-719-912-20	DIODE 1SS120
D915	8-719-912-20	DIODE 1SS120
D916	8-719-912-20	DIODE 1SS120
D917	8-719-912-20	DIODE 1SS120
D918	8-719-912-20	DIODE 1SS120
D919	8-719-912-20	DIODE 1SS120
D920	8-719-912-20	DIODE 1SS120
D921	8-719-912-20	DIODE 1SS120
D922	8-719-912-20	DIODE 1SS120
D923	8-719-912-20	DIODE 1SS120
D924	8-719-912-20	DIODE 1SS120
D925	8-719-303-00	DIODE SEL2510C
D926	8-719-303-00	DIODE SEL2510C
D927	8-719-303-00	DIODE SEL2510C
D928	8-719-303-00	DIODE SEL2510C
D929	8-719-303-00	DIODE SEL2510C
D930	8-719-303-00	DIODE SEL2510C
D931	8-719-303-00	DIODE SEL2510C
D932	8-719-301-38	DIODE SEL2210S-C
D934	8-719-912-20	DIODE 1SS120
D935	8-719-912-20	DIODE 1SS120
D936	8-719-912-20	DIODE 1SS120
D937	8-719-912-20	DIODE 1SS120
D938	8-719-912-20	DIODE 1SS120
D939	8-719-912-20	DIODE 1SS120
D940	8-719-912-20	DIODE 1SS120
D941	8-719-301-52	DIODE SEL2810A-C
DR1	*1-564-337-21	PIN, CONNECTOR 3P
DR2	*1-564-337-21	PIN, CONNECTOR 3P
DR3	*1-564-337-00	PIN, CONNECTOR 3P
DR4	*1-564-338-31	PIN, CONNECTOR 4P
DR5	*1-564-338-21	PIN, CONNECTOR 4P
DR6	*1-564-337-21	PIN, CONNECTOR 3P
DR7	*1-564-337-21	PIN, CONNECTOR 3P
DR8	*1-564-340-00	PIN, CONNECTOR 6P
DR9	*1-564-337-00	PIN, CONNECTOR 3P
DR10	*1-564-705-41	PIN, CONNECTOR 3P

Ref.No.	Part No.	Description
EH1	*1-564-509-11	PLUG, CONNECTOR 6P
EH2	*1-564-508-11	PLUG, CONNECTOR 5P
EH3	*1-564-505-11	PLUG, CONNECTOR 2P
EH4	*1-564-506-11	PLUG, CONNECTOR 3P
EH5	*1-564-506-11	PLUG, CONNECTOR 3P
EH6A	*1-564-505-11	PLUG, CONNECTOR 2P
EH6	*1-564-507-11	PLUG, CONNECTOR 4P
EH7	*1-564-508-11	PLUG, CONNECTOR 5P
EH8	*1-564-512-11	PLUG, CONNECTOR 9P
EH9	*1-564-506-11	PLUG, CONNECTOR 3P
EH10	*1-564-510-11	PLUG, CONNECTOR 7P
EH14	*1-564-510-11	PLUG, CONNECTOR 7P
EH15	*1-564-507-11	PLUG, CONNECTOR 4P
EH17	*1-564-509-11	PLUG, CONNECTOR 6P
EH18	*1-564-506-11	PLUG, CONNECTOR 3P
EH19	*1-564-512-11	PLUG, CONNECTOR 9P
EH20	*1-564-505-11	PLUG, CONNECTOR 2P
EH21	*1-564-506-11	PLUG, CONNECTOR 3P
F801	<u>Δ</u> 1-532-286-00	(AEP,WG)...FUSE, TIME-LAG
IC101	8-759-982-03	IC RC5532DD
IC201	8-759-982-03	IC RC5532DD
IC202	8-759-982-15	IC RC7815FA
IC203	8-759-982-41	IC RC7915FA
IC401	8-759-604-28	IC M5238L
IC402	8-759-604-28	IC M5238L
IC601	8-759-604-84	IC M5F7806L
IC602	8-759-604-84	IC M5F7806L
IC901	8-759-635-31	IC M50253P
IC902	8-759-239-47	IC TC74HC123AP
IC903	8-759-635-30	IC M50720-194SP
IC904	8-719-902-56	DIODE PC817
IC907	8-759-962-08	IC BA6208
IC908	8-759-962-08	IC BA6208
IC909	8-749-920-59	IC AIQH3020S
J101	1-580-054-11	JACK, PIN 2P
J102	1-566-882-41	JACK, PIN 4P
J103	1-566-882-41	JACK, PIN 4P
J104	1-566-883-31	JACK, PIN 6P
J105	1-566-883-41	JACK, PIN 6P
J106	1-566-883-41	JACK, PIN 6P
J110	1-507-796-71	JACK (PHONES)
J401	1-580-061-11	PLUG, CONNECTOR 3P
J402	1-580-061-11	PLUG, CONNECTOR 3P
J403	1-580-060-11	RECEPTACLE, CONNECTOR 3P
J404	1-580-060-11	RECEPTACLE, CONNECTOR 3P
J601	*1-569-625-11	(AEP,WG)...SOCKET, CONNECTOR 3P (POWER CONTROL)
J602	1-564-980-11	PIN, CONNECTOR 4P (CONTROL S)
L201	1-424-397-11	(WG)...COIL CHOKE 200UH
L202	1-424-397-11	(WG)...COIL CHOKE 200UH
L251	1-424-397-11	(WG)...COIL CHOKE 200UH
L252	1-424-397-11	(WG)...COIL CHOKE 200UH
Q101	8-729-201-56	TRANSISTOR 2SK246-GR2
Q103	8-729-203-45	TRANSISTOR 2SC3423
Q104	8-759-108-01	TRANSISTOR UPA68HA-M
Q105	8-729-209-17	TRANSISTOR 2SA1360
Q106	8-729-209-17	TRANSISTOR 2SA1360
Q107	8-729-142-01	TRANSISTOR 2SC1941-LK

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description			
Q108	8-729-142-01	TRANSISTOR 2SC1941-LK			
Q109	8-729-203-45	TRANSISTOR 2SC3423			
Q110	8-729-209-17	TRANSISTOR 2SA1360			
Q111	8-729-127-53	TRANSISTOR 2SC2275-P			
Q112	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q113	8-729-201-56	TRANSISTOR 2SK246-GR2			
Q114	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q115	8-729-141-03	TRANSISTOR 2SA733-QP			
Q116	8-729-201-56	TRANSISTOR 2SK246-GR2			
Q117	8-729-141-03	TRANSISTOR 2SA733-QP			
Q118	8-729-190-53	TRANSISTOR 2SA985A			
Q151	8-729-201-56	TRANSISTOR 2SK246-GR2			
Q153	8-729-203-45	TRANSISTOR 2SC3423			
Q154	8-759-108-01	TRANSISTOR UPA68HA-M			
Q155	8-729-209-17	TRANSISTOR 2SA1360			
Q156	8-729-209-17	TRANSISTOR 2SA1360			
Q157	8-729-142-01	TRANSISTOR 2SC1941-LK			
Q158	8-729-142-01	TRANSISTOR 2SC1941-LK			
Q159	8-729-203-45	TRANSISTOR 2SC3423			
Q160	8-729-209-17	TRANSISTOR 2SA1360			
Q201	8-729-214-73	TRANSISTOR 2SK147-V			
Q202	8-729-805-05	TRANSISTOR 2SC3601			
Q203	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q204	8-729-201-56	TRANSISTOR 2SK246-GR2			
Q209	8-729-214-73	TRANSISTOR 2SK147-V			
Q251	8-729-214-73	TRANSISTOR 2SK147-V			
Q252	8-729-805-05	TRANSISTOR 2SC3601			
Q253	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q254	8-729-201-56	TRANSISTOR 2SK246-GR2			
Q259	8-729-214-73	TRANSISTOR 2SK147-V			
Q601	8-729-194-57	TRANSISTOR 2SC945-P			
Q602	8-729-141-03	TRANSISTOR 2SA733-QP			
Q603	8-729-141-03	TRANSISTOR 2SA733-QP			
Q604	8-729-194-57	TRANSISTOR 2SC945-P			
Q605	8-729-140-96	TRANSISTOR 2SD774-34			
Q607	8-729-194-57	TRANSISTOR 2SC945-P			
Q901	8-729-900-36	TRANSISTOR DTC124ES			
Q902	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q903	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q904	8-729-900-80	TRANSISTOR DTC114ES			
Q905	8-729-900-61	TRANSISTOR DTA114ES			
Q906	8-729-900-61	TRANSISTOR DTA114ES			
Q912	8-729-119-77	TRANSISTOR 2SA1175-FEK			
Q913	8-729-900-61	TRANSISTOR DTA114ES			
R100	1-249-469-11	CARBON	100K	5%	1/4W
R101	1-246-545-00	CARBON	1M	5%	1/4W
R102	1-246-545-00	CARBON	1M	5%	1/4W
R103	1-246-545-00	CARBON	1M	5%	1/4W
R104	1-246-545-00	CARBON	1M	5%	1/4W
R105	1-246-545-00	CARBON	1M	5%	1/4W
R106	1-247-713-11	CARBON	1K	5%	1/4W
R107	1-247-713-11	CARBON	1K	5%	1/4W
R108	1-247-713-11	CARBON	1K	5%	1/4W
R109	1-247-713-11	CARBON	1K	5%	1/4W
R110	1-247-700-11	CARBON	100	5%	1/4W
R111	1-246-545-00	CARBON	1M	5%	1/4W

Ref.No.	Part No.	Description			
R112	1-249-673-11	CARBON	1K	5%	1/2W
R113	1-214-937-00	CARBON	1M	5%	1/2W
R114	1-247-717-11	CARBON	2.2K	5%	1/4W
R115	1-249-798-11	CARBON	680	5%	1/2W
R116	1-249-824-11	CARBON	8.2K	5%	1/2W
R117	1-249-661-11	CARBON	330	5%	1/2W
R118	1-249-799-11	CARBON	750	5%	1/2W
R119	1-249-799-11	CARBON	750	5%	1/2W
R120	1-247-747-11	CARBON	470	5%	1/2W
R121	1-247-764-11	CARBON	10K	5%	1/2W
R122	1-249-677-11	CARBON	1.5K	5%	1/2W
R123	1-249-677-11	CARBON	1.5K	5%	1/2W
R124	1-259-571-11	CARBON	4.7K	1%	1/2W
R125	1-247-739-11	CARBON	100	5%	1/2W
R126	1-249-641-11	CARBON	47	5%	1/2W
R127	1-249-641-11	CARBON	47	5%	1/2W
R128	1-246-545-00	CARBON	1M	5%	1/4W
R129	1-249-512-11	CARBON	22	5%	1/4W
R130	1-249-465-11	CARBON	47K	5%	1/4W
R131	1-249-465-11	CARBON	47K	5%	1/4W
R132	1-249-497-11	CARBON	33K	5%	1/4W
R133	1-247-721-11	CARBON	4.7K	5%	1/4W
R134	1-247-739-11	CARBON	100	5%	1/2W
R135	1-259-476-11	CARBON	100K	5%	1/6W
R136	1-249-547-11	CARBON	620	5%	1/4W
R137	1-259-547-11	CARBON	470	1%	1/2W
R138	1-249-547-11	CARBON	620	5%	1/4W
R143	1-249-469-11	CARBON	100K	5%	1/4W
R144	1-247-707-11	CARBON	390	5%	1/4W
R145	1-247-717-11	CARBON	2.2K	5%	1/4W
R146	1-247-704-11	CARBON	220	5%	1/4W
R147	1-247-725-11	CARBON	10K	5%	1/4W
R148	1-247-723-11	CARBON	6.8K	5%	1/4W
R150	1-249-469-11	CARBON	100K	5%	1/4W
R151	1-246-545-00	CARBON	1M	5%	1/4W
R152	1-246-545-00	CARBON	1M	5%	1/4W
R153	1-246-545-00	CARBON	1M	5%	1/4W
R154	1-246-545-00	CARBON	1M	5%	1/4W
R155	1-246-545-00	CARBON	1M	5%	1/4W
R156	1-247-713-11	CARBON	1K	5%	1/4W
R157	1-247-713-11	CARBON	1K	5%	1/4W
R158	1-247-713-11	CARBON	1K	5%	1/4W
R159	1-247-713-11	CARBON	1K	5%	1/4W
R160	1-247-713-11	CARBON	1K	5%	1/4W
R161	1-246-545-00	CARBON	1M	5%	1/4W
R162	1-249-673-11	CARBON	1K	5%	1/2W
R163	1-214-937-00	CARBON	1M	5%	1/2W
R164	1-247-717-11	CARBON	2.2K	5%	1/4W
R165	1-249-798-11	CARBON	680	5%	1/2W
R166	1-249-824-11	CARBON	8.2K	5%	1/2W
R167	1-249-661-11	CARBON	330	5%	1/2W
R168	1-249-670-91	CARBON	750	5%	1/2W
R169	1-249-670-91	CARBON	750	5%	1/2W
R170	1-247-747-11	CARBON	470	5%	1/2W
R171	1-247-764-11	CARBON	10K	5%	1/2W
R172	1-249-677-11	CARBON	1.5K	5%	1/2W
R173	1-249-677-11	CARBON	1.5K	5%	1/2W

Ref.No.	Part No.	Description						
R174	1-259-571-11	CARBON	4.7K	1%	1/2W			
R175	1-247-739-11	CARBON	100	5%	1/2W			
R176	1-249-641-11	CARBON	47	5%	1/2W			
R177	1-249-641-11	CARBON	47	5%	1/2W			
R178	1-246-545-00	CARBON	1M	5%	1/4W			
R179	1-249-512-11	CARBON	22	5%	1/4W			
R180	1-249-465-11	CARBON	47K	5%	1/4W			
R181	1-249-465-11	CARBON	47K	5%	1/4W			
R182	1-249-497-11	CARBON	33K	5%	1/4W			
R183	1-247-721-11	CARBON	4.7K	5%	1/4W			
R184	1-247-739-11	CARBON	100	5%	1/2W			
R185	1-259-476-11	CARBON	100K	5%	1/6W			
R186	1-249-547-11	CARBON	620	5%	1/4W			
R187	1-259-547-11	CARBON	470	1%	1/2W			
R188	1-249-547-11	CARBON	620	5%	1/4W			
R195	1-247-717-11	CARBON	2.2K	5%	1/4W			
R196	1-247-704-11	CARBON	220	5%	1/4W			
R197	1-247-725-11	CARBON	10K	5%	1/4W			
R198	1-249-577-11	CARBON	11K	5%	1/4W			
R201	1-249-465-11	CARBON	47K	5%	1/4W			
R202	1-247-706-11	(AEP,E)...CARBON	330	5%	1/4W			
R203	1-247-713-11	CARBON	1K	5%	1/4W			
R204	1-247-700-11	CARBON	100	5%	1/4W			
R205	1-247-128-00	CARBON	750	5%	1/4W			
R206	1-247-128-00	CARBON	750	5%	1/4W			
R207	1-249-512-11	CARBON	22	5%	1/4W			
R208	1-247-708-11	CARBON	470	5%	1/4W			
R209	1-249-518-11	CARBON	39	5%	1/4W			
R210	1-247-704-11	CARBON	220	5%	1/4W			
R211	1-247-721-11	CARBON	4.7K	5%	1/4W			
R212	1-246-545-00	CARBON	1M	5%	1/4W			
R213	1-249-843-11	CARBON	51K	1%	1/2W			
R214	1-247-144-00	CARBON	3.6K	1%	1/4W			
R215	1-249-818-11	CARBON	4.7K	1%	1/2W			
R217	1-259-501-11	CARBON	6.8	5%	1/2W			
R218	1-247-739-11	CARBON	100	5%	1/2W			
R219	1-247-704-11	CARBON	220	5%	1/4W			
R220	1-249-417-11	(WG)...CARBON	1K	5%	1/4W			
R221	1-249-417-11	(WG)...CARBON	1K	5%	1/4W			
R223	1-217-481-00	FUSIBLE	10	5%	1W	F		
R251	1-249-465-11	CARBON	47K	5%	1/4W			
R252	1-247-706-11	(AEP,E)...CARBON	330	5%	1/4W			
R253	1-247-713-11	CARBON	1K	5%	1/4W			
R254	1-247-700-11	CARBON	100	5%	1/4W			
R255	1-247-128-00	CARBON	750	5%	1/4W			
R256	1-247-128-00	CARBON	750	5%	1/4W			
R257	1-249-512-11	CARBON	22	5%	1/4W			
R258	1-247-708-11	CARBON	470	5%	1/4W			
R259	1-249-518-11	CARBON	39	5%	1/4W			
R260	1-247-704-11	CARBON	220	5%	1/4W			
R261	1-247-721-11	CARBON	4.7K	5%	1/4W			
R262	1-246-545-00	CARBON	1M	5%	1/4W			
R263	1-249-843-11	CARBON	51K	1%	1/2W			
R264	1-247-144-00	CARBON	3.6K	1%	1/4W			
R265	1-249-818-11	CARBON	4.7K	1%	1/2W			
R267	1-259-501-11	CARBON	6.8	5%	1/2W			
R268	1-247-739-11	CARBON	100	5%	1/2W			
R269	1-247-704-11	CARBON	220	5%	1/4W			
R270	1-249-417-11	(WG)...CARBON	1K	5%	1/4W			
R271	1-249-417-11	(WG)...CARBON	1K	5%	1/4W			
R273	1-217-481-00	FUSIBLE	10	5%	1W	F		
R302	1-247-721-11	CARBON	4.7K	5%	1/4W			
R303	1-249-598-00	CARBON	680	5%	1/4W			
R304	1-247-716-11	CARBON	1.8K	5%	1/4W			
R305	1-247-128-00	CARBON	750	5%	1/4W			
R306	1-249-577-11	CARBON	11K	5%	1/4W			
R307	1-247-138-00	CARBON	2K	5%	1/4W			
R309	1-249-577-11	CARBON	11K	5%	1/4W			
R310	1-259-502-11	CARBON	4.7M	5%	1/4W			
R311	1-259-502-11	CARBON	4.7M	5%	1/4W			
R312	1-259-502-11	CARBON	4.7M	5%	1/4W			
R313	1-259-502-11	CARBON	4.7M	5%	1/4W			
R314	1-259-502-11	CARBON	4.7M	5%	1/4W			
R315	1-259-502-11	CARBON	4.7M	5%	1/4W			
R316	1-247-152-00	CARBON	8.2K	5%	1/4W			
R317	1-249-469-11	CARBON	100K	5%	1/4W			
R352	1-249-465-11	CARBON	47K	5%	1/4W			
R353	1-247-152-00	CARBON	8.2K	5%	1/4W			
R354	1-247-716-11	CARBON	1.8K	5%	1/4W			
R355	1-247-128-00	CARBON	750	5%	1/4W			
R356	1-249-577-11	CARBON	11K	5%	1/4W			
R357	1-247-138-00	CARBON	2K	5%	1/4W			
R359	1-249-577-11	CARBON	11K	5%	1/4W			
R360	1-259-502-11	CARBON	4.7M	5%	1/4W			
R361	1-259-502-11	CARBON	4.7M	5%	1/4W			
R362	1-259-502-11	CARBON	4.7M	5%	1/4W			
R363	1-259-502-11	CARBON	4.7M	5%	1/4W			
R364	1-259-502-11	CARBON	4.7M	5%	1/4W			
R365	1-259-502-11	CARBON	4.7M	5%	1/4W			
R366	1-247-152-00	CARBON	8.2K	5%	1/4W			
R367	1-249-469-11	CARBON	100K	5%	1/4W			
R402	1-247-725-11	CARBON	10K	5%	1/4W			
R403	1-247-721-11	CARBON	4.7K	5%	1/4W			
R405	1-247-725-11	CARBON	10K	5%	1/4W			
R406	1-247-725-11	CARBON	10K	5%	1/4W			
R407	1-246-545-00	CARBON	1M	5%	1/4W			
R408	1-247-725-11	CARBON	10K	5%	1/4W			
R409	1-247-725-11	CARBON	10K	5%	1/4W			
R410	1-247-721-11	CARBON	4.7K	5%	1/4W			
R411	1-246-545-00	CARBON	1M	5%	1/4W			
R412	1-249-547-11	CARBON	620	5%	1/4W			
R413	1-212-857-00	FUSIBLE	10	5%	1/4W	F		
R414	1-212-857-00	FUSIBLE	10	5%	1/4W	F		
R415	1-212-857-00	FUSIBLE	10	5%	1/4W	F		
R416	1-212-857-00	FUSIBLE	10	5%	1/4W	F		
R417	1-249-547-11	CARBON	22	5%	1/4W			
R452	1-247-725-11	CARBON	10K	5%	1/4W			
R453	1-247-721-11	CARBON	4.7K	5%	1/4W			
R455	1-247-725-11	CARBON	10K	5%	1/4W			
R456	1-247-725-11	CARBON	10K	5%	1/4W			
R457	1-246-545-00	CARBON	1M	5%	1/4W			
R458	1-247-725-11	CARBON	10K	5%	1/4W			
R459	1-247-725-11	CARBON	10K	5%	1/4W			
R460	1-247-721-11	CARBON	4.7K	5%	1/4W			
R461	1-246-545-00	CARBON	1M	5%	1/4W			
R462	1-249-547-11	CARBON	620	5%	1/4W			

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description			
R601	1-247-717-11	CARBON	2.2K	5%	1/4W
R602	1-249-465-11	CARBON	47K	5%	1/4W
R603	1-247-721-11	CARBON	4.7K	5%	1/4W
R604	1-249-468-11	CARBON	82K	5%	1/4W
R605	1-247-717-11	CARBON	2.2K	5%	1/4W
R606	1-247-721-11	CARBON	4.7K	5%	1/4W
R607	1-247-116-00	CARBON	240	5%	1/4W
R608	1-249-462-11	CARBON	22K	5%	1/4W
R609	1-249-465-11	CARBON	47K	5%	1/4W
R612	1-247-721-11	CARBON	4.7K	5%	1/4W
R613	1-247-725-11	CARBON	10K	5%	1/4W
R614	1-249-462-11	CARBON	22K	5%	1/4W
R615	1-246-435-00	CARBON	27	5%	1/4W
R616	1-247-721-11	CARBON	4.7K	5%	1/4W
R901	1-249-433-11	CARBON	22K	5%	1/4W
R902	1-249-433-11	CARBON	22K	5%	1/4W
R903	1-249-433-11	CARBON	22K	5%	1/4W
R904	1-249-433-11	CARBON	22K	5%	1/4W
R905	1-249-433-11	CARBON	22K	5%	1/4W
R906	1-249-433-11	CARBON	22K	5%	1/4W
R907	1-249-433-11	CARBON	22K	5%	1/4W
R908	1-249-417-11	CARBON	1K	5%	1/4W
R909	1-249-429-11	CARBON	10K	5%	1/4W
R910	1-247-887-00	CARBON	220K	5%	1/4W
R911	1-249-441-11	CARBON	100K	5%	1/4W
R912	1-249-441-11	CARBON	100K	5%	1/4W
R913	1-247-895-00	CARBON	470K	5%	1/4W
R914	1-249-425-11	CARBON	4.7K	5%	1/4W
R915	1-249-430-11	CARBON	12K	5%	1/4W
R916	1-249-405-11	CARBON	100	5%	1/4W
R917	1-247-903-00	CARBON	1M	5%	1/4W
R918	1-249-429-11	CARBON	10K	5%	1/4W
R919	1-249-429-11	CARBON	10K	5%	1/4W
R920	1-249-425-11	CARBON	4.7K	5%	1/4W
R921	1-249-429-11	CARBON	10K	5%	1/4W
R922	1-249-425-11	CARBON	4.7K	5%	1/4W
R923	1-249-425-11	CARBON	4.7K	5%	1/4W
R924	1-249-425-11	CARBON	4.7K	5%	1/4W
R925	1-249-425-11	CARBON	4.7K	5%	1/4W
R926	1-249-413-11	CARBON	470	5%	1/4W
R927	1-249-429-11	CARBON	10K	5%	1/4W
R928	1-249-429-11	CARBON	10K	5%	1/4W
R929	1-249-429-11	CARBON	10K	5%	1/4W
R930	1-249-429-11	CARBON	10K	5%	1/4W
R931	1-249-429-11	CARBON	10K	5%	1/4W
R932	1-249-421-11	CARBON	2.2K	5%	1/4W
R934	1-247-688-11	CARBON	10	5%	1/4W
R936	1-247-688-11	CARBON	10	5%	1/4W
R938	1-249-429-11	CARBON	10K	5%	1/4W
R940	1-249-399-11	CARBON	33	5%	1/4W
R941	1-249-441-11	CARBON	100K	5%	1/4W
R942	1-249-429-11	CARBON	10K	5%	1/4W
R943	1-249-401-11	CARBON	47	5%	1/4W
R944	1-249-417-11	CARBON	1K	5%	1/4W
R945	1-249-441-11	CARBON	100K	5%	1/4W
R946	1-249-441-11	CARBON	100K	5%	1/4W
R947	1-249-441-11	CARBON	100K	5%	1/4W
R948	1-249-441-11	CARBON	100K	5%	1/4W

Ref.No.	Part No.	Description			
R949	1-247-710-11	CARBON	560	5%	1/4W
R950	1-247-708-11	CARBON	470	5%	1/4W
R951	1-249-429-11	CARBON	10K	5%	1/4W
R952	1-249-441-11	CARBON	100K	5%	1/4W
R953	1-249-393-11	CARBON	10	5%	1/4W
R954	1-247-706-11	CARBON	330	5%	1/4W
R955	1-249-399-11	CARBON	33	5%	1/4W
R956	1-247-706-11	CARBON	330	5%	1/4W
R957	1-249-429-11	CARBON	10K	5%	1/4W
R958	1-249-429-11	CARBON	10K	5%	1/4W
RV301	1-241-187-11	RES, VAR, CARBON 250K/250K (BALANCE)			
RV302	1-241-189-11	RES, VAR, CARBON 25K/100K (TREBLE)			
RV303	1-241-188-11	RES, VAR, CARBON 25K/250K (BASS)			
RV304	1-241-186-11	RES, VAR, CARBON 60K/60K (ATTENUATOR)			
RY101	1-515-787-11	RELAY			
RY102	1-515-725-11	RELAY			
RY103	1-515-725-11	RELAY			
RY401	1-515-725-11	RELAY			
RY601	Δ 1-515-617-11	RELAY			
RY901	1-515-725-11	RELAY			
RY902	1-515-725-11	RELAY			
S101	1-572-096-21	SWITCH, ROTARY (WITH MOTOR) (INPUT SELECTOR)			
S102	1-570-076-11	SWITCH, SLIDE (REMOTE TYPE) (REC OUT SELECTOR)			
S104	1-572-095-11	SWITCH, ROTARY (ATTENUATOR)			
S201	1-554-019-21	SWITCH, SLIDE (REMOTE TYPE) (CARTRIDGE LOAD)			
S302	1-572-428-11	SWITCH, PUSH (2 KEY)(SUBSONIC)			
S304	1-572-429-11	SWITCH, PUSH (2 KEY)(SOURCE DIRECT) (ADAPTOR)			
S305	1-572-427-11	SWITCH, PUSH (2 KEY)(TURNOVER)			
S306	1-572-427-11	SWITCH, PUSH (2 KEY)(TURNOVER)			
S307	1-572-428-11	SWITCH, PUSH (2 KEY)(MODE)			
S308	1-572-426-11	SWITCH, PUSH (1 KEY)(OUTPUT)			
S401	1-570-358-11	SWITCH, SLIDE (CD INPUT SELEC)			
S901	1-554-303-21	SWITCH, KEY BOARD (POWER)			
S902	1-554-303-21	SWITCH, KEY BOARD (MUTING)			
S951	Δ 1-571-309-11	(E)...SWITCH (VOLTAGE SELECTOR)			
T1	Δ 1-450-182-11	(AEP,WG)...TRANSFORMER, POWER			
T1	Δ 1-450-183-11	(E).....TRANSFORMER, POWER			
T2	Δ 1-450-184-11	(AEP,WG)...TRANSFORMER, POWER			
T2	Δ 1-450-185-11	(E).....TRANSFORMER, POWER			
VH1	*1-564-321-11	(E)...PIN, CONNECTOR 2P			
VH2	*1-565-792-11	(E)...PIN, CONNECTOR 2P			
VH3	*1-564-321-00	PIN, CONNECTOR 2P			
VH4	*1-564-687-11	(E)...PIN, CONNECTOR 3P			
VH5	*1-565-792-11	(AEP,WG)...PIN, CONNECTOR 2P			
VH6	*1-564-104-00	PIN, CONNECTOR 3P			
VH7	*1-564-321-11	(E)...PIN, CONNECTOR 2P			
VH10	*1-568-226-11	(AEP,WG)...PIN, CONNECTOR 2P			
X901	1-577-260-21	VIBRATOR, CERAMIC			

ACCESSORY & PACKING MATERIAL

1-465-532-11	COMMANDER, REMOTE
1-558-787-31	CORD, CONNECTION
3-752-327-11	(AEP,E)...MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE)
3-752-327-41	(AEP,WG)...MANUAL, INSTRUCTION (DUTCH, SWEDISH, ITALIAN)
*4-933-001-01	CUSHION
*4-941-753-01	INDIVIDUAL CARTON